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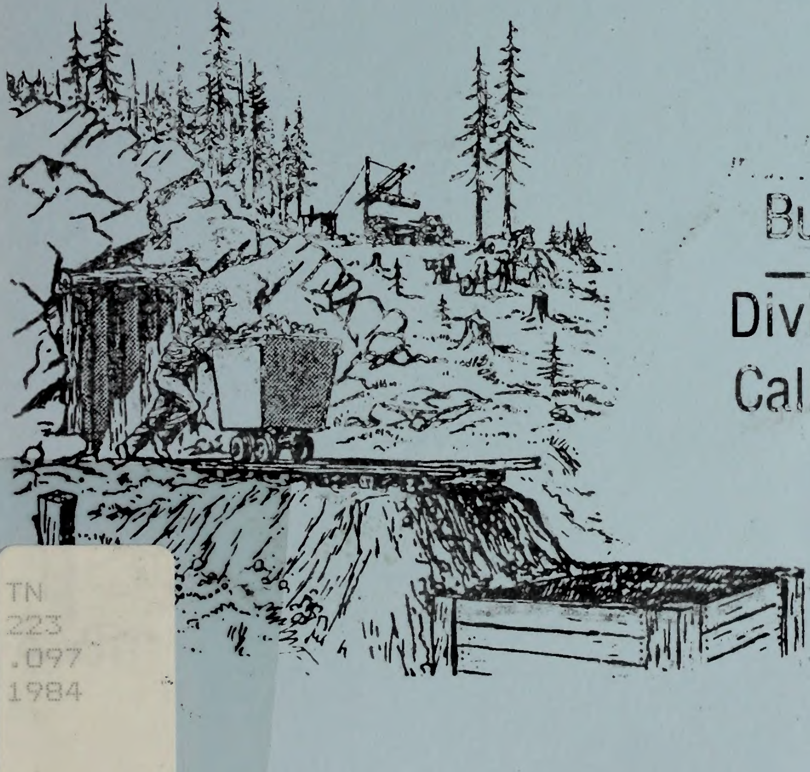
OUTLINE

# of the

Workshop on Guidelines

for

Validity Examinations



United States
Department of the Interior
Bureau of Land Management

Division of Mineral Resources
California State Office

February 6-8 ,1984
Sacramento
California

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OUTLINE OF THE

WORKSHOP ON GUIDELINES FOR VALIDITY EXAMINATIONS

Convened by

Bureau of Land Management
Sacramento, California

Jim Evans, Mining Engineer, and
Reg Reid, Geologist
Division of Mineral Resources

February 6, 7, and 8, 1984

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AGENDA*

BLM GUIDELINES FOR VALIDITY/PATENT EXAMINATION AND MINERAL REPORTS

February 6-8 1984

MONDAY

10:00	I.	WELCOME	Ed Hastey
	II.	INTRODUCTION	Jim Evans
		* PURPOSE	
		* SCOPE/INTENT OF WORKSHOP	
		* INTRODUCTION OF FACILITATOR	
	III.	AGENDA REVIEW	Tricia Swift
	IV.	SELF-INTRODUCTION	All
		* NAME	
		* AFFILIATION	
		* EXPECTATIONS OF WORKSHOP	
11:00	V.	REASONS FOR VALIDITY EXAMS (15 min)	Reg Reid
		* QUESTIONS	
		* COMMENTS	
NOON		LUNCH	
1:00		DISCOVERY OF VALUABLE MINERALS (30 min)	Jim Evans
		* LEGAL CONSTRAINTS	
		* WHAT CONSTITUTES DISCOVERY	
		* QUESTIONS	
		* COMMENTS	
		CRITERIA FOR COMMON VARIETY/LOCATABLE MINERALS (15 min)	
		* QUESTIONS	
		* COMMENTS	
2:45		BREAK	

*Actual Agenda varied from planned Agenda. Items marked with an * were covered on Tuesday, Day II, rather than on the day scheduled.

MONDAY (Continued)

3:00	EXCESS RESERVES* (15 min)	Reg Reid
	* QUESTIONS	
	* COMMENTS	
4:00	TEN-ACRE RULE* (30 min)	Jim Evans
	* QUESTIONS	
	* COMMENTS	
4:45	SUMMARY/PREVIEW OF NEXT DAY	
5:00	CLOSE	

TUESDAY

8:00	SUMMARY OF PREVIOUS DAY	
	AGENDA REVIEW	
	MILL SITES (15 min)	Reg Reid
	* QUESTIONS	
	* COMMENTS	
9:00	FIELD EXAMINATION	Jim Evans
	* OVERALL VIEW OF PRE-EXAM AND EXAM (15 min)	
	- PRE EXAM	
	- ON-SITE ACTIVITIES	
	- WRITE-UP OF RESULT--DOCUMENTATION OF FINDINGS	
10:00	BREAK	
10:15	- TECHNICAL REVIEW	
	- MANAGEMENT REVIEW	
	- DECISION (CONTEST/VALID)	
	- QUESTIONS	
	- COMMENTS	
NOON	LUNCH	

TUESDAY (Continued)

1:00	FIELD EXAMINATION (CONTINUED)	
2:45	BREAK	
3:00	PREPARATION OF MINERAL REPORTS (15 min)	Reg Reid
	* QUESTIONS	
	* COMMENT	
4:45	SUMMARY/REVIEW OF NEXT DAY	
5:00	CLOSE	

WEDNESDAY

8:00	SUMMARY OF PREVIOUS DAY	
	AGENDA REVIEW	
8:15	SAMPLING & ANALYTICAL PROCEDURES	
	* PLACER SAMPLING AND PROCESSING (60 min)	Jim Evans
	- QUESTIONS	
	- COMMENT	
9:30	* NICKLE LATERITES* (30 min)	Charles Dowd
	- QUESTIONS	
	- COMMENT	
10:15	BREAK	
10:30	* SAMPLE PREPARATION AND ANALYTICAL TECHNIQUES OF FIRE ASSAY, AA, ICP/AES AND SEMI-QUANTITATIVE SPECTROMETRY (60 min)	Ken Broadhead
	- QUESTIONS	
	- COMMENT	
12:00	LUNCH	
1:00	* BLM GUIDELINES ON SAMPLING PROCEDURES (60 min)	Jim Evans
	- QUESTIONS	
	- COMMENT	

WEDNESDAY (Continued)

3:00	BREAK
3:15	REVIEW/VERIFICATION OF CONFERENCE NOTES FOR PREPARATION OF FINAL REPORT
4:45	SUMMARY
5:00	CLOSE

WORKSHOP PROCEEDINGS

MONDAY, DAY I

INTRODUCTION

Ed Hastey, California State BLM Director, welcomed participants to the BLM's three-day workshop on developing guidelines for validity examinations. Hastey cited the progress made in recent years on processing a backlog of examinations. He challenged participants to work with BLM to improve the guidelines, to identify problems, to make suggestions about how to resolve problems, and to communicate information about guidelines to miners themselves.

The purpose of the workshop is to provide input into the new BLM draft copy of the Field Examiners Handbook. Input will also be needed to develop technical guidelines for validity examinations conducted in California. These guidelines will be published and available as a useful tool for the public.

Tricia Swife and Phil Stanbro, facilitator and recorder for the workshop, described their roles, and Swift reviewed the agenda. The agenda, designed to provide ample time for discussion and input as desired by BLM, incorporated brief presentations of information, each followed by clarifying questions and then comments and discussion.

EXPECTATIONS

In the course of introductions, participants in general expressed the need to acquire more information about the validity examination process, to develop joint understanding of the examination procedures, and to develop a constructive dialogue between the BLM and miners. In addition, several expressed the desire to have, at some future time, further discussion regarding policy and management issues: the why of validity examinations.

AGENDA ITEMS

Reasons for Validity Exams

Reg Reid reviewed guidelines and laws regarding the reasons for validity examinations and the determination of priorities for validity exams. Reid cited the authority for conducting validity examinations as follows:

- Act of April 25, 1812 (R. S. 453; 43 USC 2)
- General Mining Law of 1872 (17 Stat. 91)
- Cameron v. U.S. (252 US 450) 1920
- Act of July 23, 1955 (69 Stat. 367; 30 USC 601)
- 43 CFR 3800 -- See Appendix 2
- Washington Office Instruction Memorandum No. 83-311
  (February 8, 1983) -- See Appendix 3

° 1957 Memorandum of Understanding between BLM and USFS

The purpose of validity exams is, in general, to provess patents or to resolve conflicts regarding the use of public lands. Types of conflicts include:

1. Multiple Use
    - Public Law 167
    - Withdrawals
    - Other
2. Surface Disposals
    - Recreation and Public Purpose Act Applications (R & PP)
    - Private Exchanges
    - Public Sales
    - Desert Land Entries
    - Other
3. Suspected Trespass
    - Occupancy
    - Mineral Material Removal
4. Condemnation
    - Easement Acquisition
    - Wild and Scenic River Acquisition
5. Reimbursable Projects
    - Bureau of Reclamation projects
    - Army Corps of Engineers projects

Reid cited the guidelines for validity exams that are currently in draft form and in the process of review and comment, and introduced Roger Haskins, geologist of the BLM's Washington Office, one of the authors of the draft Field Examiners Handbook.

Haskins responded at length to questions about the draft guidelines. Specific information included the following points:

° Comment period on guidelines ends April 30, 1984.

° Regarding statutory abandonment, BLM is awaiting a final decision on their appeal of Lock vs. Watt. Thus at this time, late filings of proof assessment work are not being processed as statutory abandonment.

° Consideration of "two tiered" approach to validity examinations is currently under consideration by Assistant Secretary of the Interior, Garrey Carruthers.

° Although both USFS and BLM conduct validity examinations, BLM has the authority of final review of validity examination reports.

° Independent mineral reports can expedite, but not substantiate for BLM reports.

In the course of comment and discussion, participants expressed:

- Strong support for the "two-tiered" approach.
- The need for standardization of field procedures in use by the USFS and BLM.
- Concern that field procedures used by different examiners, even within the same agency, are not consistent or standardized.
- Concern for the adequacy of training for examiners.
- Concern that technical standards (e.g., of assays) used by BLM/USFS are not consistent with industry standards and that they should be. For example, a fire assay alone may not prove accurately the quality (and thus the marketability) of a deposit.
- Need for information regarding:
  - a. Curriculum for the training of examiners and standardized qualifications for examiners.
  - b. The cost of the validity examination process.

Many questions and comments focused on the need for standardization of field procedures and consistency of policy between BLM and USFS. The perceived lack of standardization was identified as a significant and consistent problem for miners.

Additional Issues

Before moving on to the Agenda item regarding "Discovery," participants identified several additional issues:

- The need for a mechanism to document complaints by a claimant regarding the adequacy of a validity report.
- The need for a file to show and document the development of the report, rather than just the final report.
- The need for a dialogue opportunity between the examiner and the claimant in the validity exam, similar to what has been agreed upon in a patent examination.
- The need for guidelines for managers for initiating a validity exam.
- The need for managers to document reasons for initiating a validity exam.
- To cope with occupancy trespass issues, the suggestion to use other means and mechanisms than validity examinations.
- The need to increase the notice period for validity exams from the current 30-day period.

- Suction Dredging:
  - a. Withdraw areas for recreational dredging.
  - b. Standardize with USFS and California F&G the recreational dredging nozzle size at 8 inches.
  - c. Consider that live streams are constantly replenished.
  - d. Develop methods for assessing quantity of material in a stream bed that remains for dredging.
- The need to maintain/assure confidentiality of information provided by the miner in the course of the validity examination.
- The need to establish a claim "development period" to provide time to establish a discovery before a validity examination is initiated.

Some, but not all of these issues fell within the scope of the workshop. Those not covered by the workshop are hereby documented for further consideration or a future workshop.

What Constitutes "Discovery"--Locatable Minerals

Jim Evans referred participants to page 3 of "Definitions of Mineral and Mining Terms" (Appendix 5) for the definition of "Discovery." He stressed that discovery is determined by the "prudent man" concept (p.3 of Appendix 5) and the marketability rule (p.3 of Appendix 5, Appendix 6, and Appendix 7) that there must be a discovery on each claim except in special cases; and that discovery of locatable minerals cannot be determined by geologic inference. A discovery must be actual and in-place (enforced).

To initiate the translating of the legal aspects of discovery into field and office practice, two illustrated case histories were discussed by Evans. One case was a small Mother Lode gold mine, the other a large undeveloped carbonate rock deposit.

Participants' questions and comments focused primarily on interpretation of the prudent man concept, definition of profit, and calculations of marketability.

- In a "prudent man" analysis, miners should not be held to otherwise generally prevailing economic standard of cash flow, wages, and profitability. Miners are often content with a very elemental lifestyle, and are willing to assume the long-term risk of many lean years in hope of eventually finding a rich deposit.
  - a. Profit should be defined as "if what you have when you are done is enough to live on."
  - b. Miners should be allowed as much "risk" as any other entrepreneur.
  - c. Economic analyses of profitability should be based on minimum wage scale or less--certainly not more.

- There was strong opinion that "profitability" of an individual miner's operation be determined on a highly individualized basis, considering that individual's own determination of adequate "profit," that individual's own particular situation in terms of lifestyle, experience, and willingness to accept risk.

- There was strong opinion that marketability considerations should include future marketability as well as current marketability. For instance, assessing a deposit's long-term marketability may include considering developing technology and international relations issues, as is the case with chromium. A chromium deposit today must have a 40% grade or better to be considered profitable/marketable. Processing techniques that are under development and/or political events in Rhodesia (world's current major supplier) could significantly alter the marketability analyses of chromium deposits of less than 40% grade.

- There was general agreement that the current practice of establishing price, not on the basis of the price on the day of sampling, but on the basis of fluctuations of price, is an improved practice.

- There was agreement that there needed to be standardized brackets for the fluctuations in price and recognition that such brackets would be different for different minerals.

- There was reiteration that standards for validity examinations need to be different from standards for patent examinations: that economic analyses of validity examinations should be based on expectations rather than on proven profitability.

Criteria for Common Variety vs. Locatable Minerals

If a mineral deposit is considered to be a "common variety" mineral, it is not locatable under the mining laws. Jim Evans cited the definition of "Common Varieties" as found in 43 CFR 3711.1(b) as follows:

> "Common varieties" includes deposits which, although they may have value for use in trade, manufacture, the sciences, or in the mechanical or ornamental arts, do not possess a distinct, special economic value for such use over and above the normal uses of the general run of such deposits. Mineral materials which occur commonly shall not be deemed to be "common varieties" if a particular deposit has distinct and special properties making it commercially valuable for use in manufacturing, industrial, or processing operation. In the determination of commercial value, such factors may be considered as quality and quantity of the deposit, geographical location, proximity to market or point of utilization, accessibility to transporation requirements for reasonable reserves consistent with usual industry practices to serve existing or proposed manufacturing, industrial, or processing facilities, and feasible methods for mining and removal of the material. Limestone suitable for use in the production of cement, metallurgical or chemical grade limestone, gypsum, and the like are not "common varieties." (Also see Appendix 5.)

He described the five criteria for distinguishing locatable minerals from "Common Variety" minerals which are set forth in the 1969 9th Circuit Court decision on McCarthy vs. Secretary of the Interior, 408 F2d 907,908 (9th Cir. 1969).

a. There must be a comparison of the mineral deposit in question with other such minerals generally.

b. The mineral deposits in question must have a unique property.

c. The unique property must give a deposit a distinct and special value.

d. If the special value is for uses to which ordinary varieties of the mineral are put, the deposit must have some distinct and special value for such use.

e. The distinct and special value must be reflected in the higher price which the material commands in the marketplace.

Evans described several examples to explain the determination of minerals as locatable or "common variety":

- Plumas County travertine is normally locatable, depending on its use.
- Sand and gravel are rarely locatable.
- Some, but not all gem minerals are locatable.
- Kitty litter (diatomite and silisious shale) can be considered locatable.
- Bentonite and zeolites are locatable.

Questions from participants focused on: 1) the need for greater clarification and agreement between BLM and USFS about the definition/determination of common variety vs. locatable minerals, and 2) clarification regarding the salability or classification of excess materials which occur in conjunction with a locatable mineral, and for which there may be a market.

WORKSHOP PROCEEDINGS

TUESDAY, DAY II

After reviewing a revised agenda for Day II, the workshop proceeded with the "Excess Reserves" issue.

Excess Reserves

In the past, "Excess Reserves" considerations arose in situations where there was an abundance of materials and a limited market for them, thereby creating a situation where some of the deposit was not currently valuable. Reg Reid presented a description of the test points for what is considered "reasonable" or "Excess Reserves" based on the Oneida Perlite case:

> The test for reasonable or excess reserves is controlled by the "Prudent Man" test of discovery and the requirement of present marketability of the material at a profit.

Reid defined the question of excess reserves as relating to non-metallic minerals, and involving the question of marketability. Deposits considered "excess reserves" are generally regional, low-grade, and abundant. "Excess reserves" is a descriptive phrase, applicable in the circumstance where there is more reserve than a prudent man would develop. Excess reserve determinations can be based on:

1. The nature of the mineral.
2. The unit value of the mineral.
3. The extent of the market.
4. Whether the market is expanding or diminishing.
5. The amount of similar material which can supply the market from other sources:
    a. The quantity of the claimant's other holdings of the same material.
    b. The claimant's share of the market.

Reid cited case law as follows:

1. U.S. v. Anderson (October 18, 1967 74 ID 292)
2. U.S. v. Bunkowski (5 IBLA 10, March 7, 1972, 79 ID 43)
3. U.S. v. Gibbs (13 IBLA 382, November 21, 1973)
4. U.S. v. Baker (23 IBLA 319, January 19, 1976)
5. Baker v. U.S. (613 F.2d 224, 230; Cert. denied 449 U.S. 932, October 21, 1980)

6. U.S. v. Oneida Perlite Corp. (57 IBLA 167, August 27, 1981)

7. U.S. v. Wirz (IBLA , December 29, 1983)

Baker vs. U.S., 1980, is the highest court decision, and clearly denies the use of "Excess Reserves" (too much rule) to deny the patenting of claims.

A summary of pertinent cases and past viewpoints of the BLM are presented in Appendices 8 and 9.

RECOMMENDATION and agreement of participants were that the interpretation and application of excess reserve designation must be reviewed and clarified, and communicated to the examiners and miners in the field.

Consistent with commends and recommendations developed in Day I, participants voiced again their conviction that the government should consider the future marketability of materials, and assume that new markets can be developed and penetrated.

Ten Acre Rule/"Mineral in Character" Determination

Jim Evans described the ten-acre rule which as it applies to placer claims only. Evans explained that on 20-acre placer claims, a discovery must be made on each claim. On association placer claims, the same is true. There needs to be one discovery but geologic data sufficient to infer that, for each 10-acre portion of the claim, the land is "mineral in character." Evans referred to Southern Pacific Co. 71 ID 224, 233 (1964) where the Department of Interior said:

> It is not essential that there be an actual discovery of mineral on the land [each 10 acres in this case]. It is sufficient to show only that known conditions are such as reasonably to engender the belief that the land contains mineral of such quality and in such quantity as to render its extraction profitable and justify expenditures to that end. Such belief may be predicated upon geologic conditions, discoveries of minerals in adjacent land, and other observable external conditions upon which prudent and experienced men are shown to be accustomed to act.

In further explanation, Evans cited a letter to U.S. Forest Service from Donald Fife in May 1983, regarding the White Knob Mining Claim in the San Bernardino Mountains, California, and criteria for mineral in character. Fife suggested the following criteria:

1. Mineral character is a lesser test than discovery or marketability.

2. Although a lesser test, it still must be within the bounds of contributing to the feasibility and profitability of the mining-processing operation as a whole.

3. The mineral materials upon which the showing will be based must be shown to exist: a) within each 10-acre parcel considered, b) in sufficient quantity to make a reasonable and substantial contribution to the operation, and c) as a commodity suitable in the trade specified.

4. The "lesser test" concept allows identification and acceptance of carbonate products and markets shown to have a reasonable expectation of being incorporated into the general type of commercial operation suitable for the property as a whole, but which previously either were not considered, or were held not to be able to sustain independent proof of discovery and marketability.

5. Showings of mineral in character may be supported by evidence that the materials in question can enter the product stream as diluents, additives or feedstocks for principal products of the operation, coproducts, or byproducts.

6. The presence of significant amounts of mineral materials evidencing mineral in character of 10-acre parcels of valid mining claims may be shown by geologic inference according to the usual and customary usage of such inference in the mineral industry.

In discussion, participants supported in general the guidelines for "mineral in character" determination outlined in the Fife letter quoted above. Participants urged that geologic inference include consideration of the history of an area and discoveries on nearby (upstream/downstream) claims. Further emphasis was placed here on the importance of on-going dialogue between BLM and a claimant, and on the development of a file and documentation of the process used to determine "mineral in character."

Evans agreed to develop guidelines for determining mineral in character on 10-acre plots of placer claims.

Mill Sites

Regarding the staking or patenting of claims for mill sites, Reg Reid provided information as follows:

I. Authority:

- Revised Statute 2337 as amended by the Act of March 18, 1960 (Mining Law of 1872 (Sec. 15) 30 USC 42; 43 CFR 3844 and 3864)

II. Types of Mill Sites:

- Lode Claim Associated
- Placer Claim Associated
- Custom or Independent

III. Key Elements:

- Nonmineral land
- Nearly continuous use for mining, milling, or processing purposes.
- Good Faith in Use and Occupancy.

IV. Accepted Uses of Mill Sites:

- Sinking of wells for water.
- Construction of substantial water conveyance and utilization improvements.
- Living quarters for workmen employed in a mill.
- Blacksmith shop and tool house.
- Storing ore.
- Depositing tailings.
- Depositing overburden.

V. Unacceptable Uses:

- Access to a mine.
- Conveyance of water to a mine.
- Transporting ore from a mine.
- Use of a cabin as a base of prospecting activities.
- Future use as a mill site.
- Reclamation work.

VI. Special Requirements:

- No mineral survey required for mill sites described by legal subdivision (Rectangular Coordinate System).
- Maximum size is 5 acres.
- Payment for patent is: $2.50/acre for Placer Association
  $5.00/acre for Lode Association
  $500/acre for Custom/Independent
- Mill sites cannot be located on split estate lands.
- Validity of mill site used in association with a mining claim (Lode or Placer) is dependent on the validity of the mining claim.
- Mill sites may touch the side lines or the end lines of a lode claim if the lands can be shown to be nonmineral in character.
- No requirement for patent involving proof of expenditures or improvements.
- No annual assessment work requirement, only "notice of intent to hold."
- Must be able to prove continuous use for Custom/Independent Mill Site Patent.

In response to clarifying questions, Reid covered additional information:

- Do not use a mill site for a tunnel; use other available means, or use a mining plan to justify placement of a tunnel.
- There is no limit on the permitted number of mill sites.
- There is no restriction on the location of an individual mill site other than that it must be no more than 5 acres in size and non mineral in character.

A final point was made that good faith is necessary in the siting of mill sites.

Mineral Reports

Roger Haskins reviewed the development and processing of mineral reports:

- The mineral report is the basic document and summation of the mineral examiner's findings.
- The mineral report is described, outlined, and discussed in the Draft Guidelines Handbook, Chapters III and V (Appendix 4).
- All reports go to the state BLM officer who checks for accuracy and professionalism. If a report is satisfactory, it is signed and sent to processing. If not, it is returned to the district office for revision.
- The claimant may identify information placed in the report as confidential (cf. concern re confidentiality from Day I). Information identified as confidential by the claimant will be held in confidence by BLM and by Interior Department subcontractors (e.g., USFS). When claim is patented, BLM returns proprietary information to the claimant.
- The turnaround time for the mineral report technical review in the state office is two to three weeks.
- If claimant experiences problems with a Forest Service report, he should first try to work with USFS. If necessary, he may contact the BLM state office.
- BLM policy is that the examiner discloses in his report as much information as possible. Burt Stanley, BLM Solicitor, advised that it is preferable to err on the side of too much information rather than too little.
- It is permited for a claimant to have a private geologist present for the validity examination and for parallel sampling. Haskins and Stanley stressed the importance of that person's competence.
- When adopted, the Guidelines for Validity Examinations will be operating guidelines. Deviations from the guidelines should be documented and explained.

Field Examinations

Jim Evans described his approach to Field Examination procedures. Notice of a validity examination is conveyed by registered letter to the claimant, who is afforded a 30-day notice period. Once the letter is sent, Evans advises a follow-up call to arrange for a suitable time for the field examination. Examination dates can be postponed for reasonable causes, such as illness, but not indefinitely or when there appears to be an effort to evade the examination.

° Pre-exam data gathering preparation and procedures:

1. Examine case file for completeness.
2. Check mineral survey and note if one is needed.
3. Assemble needed topographic work maps and geologic maps and air photos.
4. Assemble and examine pertinent technical and legal references--geology, mineralization, mining, mineral economics.
5. Obtain location notice, NOI to hold, assessment work forms, and other needed documents such as research of title, etc.
6. Obtain and carry BLM safety regulations--should be part of new Mineral Examination Handbook.
7. Assemble all needed field equipment.
8. Appoint party chief if more than one examiner.

° Examination:

1. Meet and discuss examinations with claimant.
2. Make diligent search for claims corners and discovery monuments.
3. Walk the claim and get a "feel" for it.
4. Prepare geologic map of claim or verify already prepared geologic maps--PLOT.
    a. Surface features--rock unit, structures, etc.
    b. Mine works on surface--also geology.
    c. Underground works--also geology.
5. Take numerous photographs--all corner parts, monuments, features.
6. Move to discovery area last:
    a. Pay special attention here--ask claimant to show areas.
    b. Maps, sketches, sampling, in appropriate manner and at appropriate scales.

7. Work up maps and sketches in field--catch errors so return trip is not needed.

8. Gather all information possible from claimant and reports he may have submitted on economic data, costs, etc.

9. Photograph and sketch all mill and plants, obtain flow sheet if available, make one if not.

10. Write up report--all data in report--full disclosure for technical reviewer, except confidential data (see Appendix 10).

Evans then showed a series of illustrations from case histories to demonstrate field procedures.

Participants agreed that Evans' approach was thorough, professional, fair, and well-documented, and that the draft Mineral Examination Guidelines should incorporate his guidelines.

In addition, participants agreed that guidelines should be written to encourage (not require) a meeting with the claimant during the pre-exam period for the purpose of reviewing with him the validity examination field procedures and sampling procedures.

Additional issues clarified by discussion:

- Comment period for Guidelines ends by April 30 in Washington, D.C. Therefore, get comments to Ed Hastey by April 6.

- Lode claim procedures apply to disseminated ore bodies.

- Samples should be taken at point of discovery and elsewhere if advisable. Point of sampling should be flagged and photographed.

- While guidelines are not laws, IBLA is holding guidelines as standards. Necessary deviations should be documented.

- In situations involving overlapping or adverse claims, it is up to the claimants themselves to resolve the problem in civil court, if necessary. Participants stated that Mineral Examinees need to have guidelines for their involvement, or lack of involvement, in claims disputes.

- Technical review of validity and patent examinations is the responsibility of the State Office of BLM.

- Both BLM and USFS are willing to notify the appropriate mining association of an impending examination if the claimant so desires. BLM's policy will be to notify the claimant that he can have another person present at the time of the examination.

Participants emphasized again that they are concerned about the professional conduct of the validity exam, and want the guidelines to be used, especially regarding sampling on placer claims.

Participants also expressed approval and appreciation for the increased dialogue with miners provided by the attitude of cooperation in general and this workshop in particular.

Sampling Procedures--Nickel Laterites

Chuck Dowd, Coastal Mining Co., described the sampling procedures developed and used by Coastal Mining at the Riddle deposit to control the grade of the ore for processing. Dowd stressed the complexity of the sampling process for nickel laterites, citing the need to assay (and know the smelting temperatures of) silicone, iron, manganese, and carbon as well as the nickel content of the sample. In addition, Coastal has found that screening of the ore changes basisity, characteristics, and configuration of the ore. Furthermore, the high varability of samples makes economic evaluation extremely unreliable. Coastal samples constantly, using shovels along the benches of the mines, taking fines, and splits of 10 lbs. Analytical methods include IP, ICP, AA.

In the discussion, Dowd and Tom Anderson, California Division of Mines and Geology, both stressed how easy it is to take a simple sample of ore and invalidate a claim; and how challenging it is to get an accurate, blended sample that will accurately reflect the value of a mine.

Dowd explained that Coastal has never patented its nickel laterites in California because of the perception that BLM mineral examiners were not familiar with nickel laterites. He stressed the need for claimant and BLM to work together to develop an accurate understanding of the value of a deposit, especially for strategic minerals. A "friendly hearing" approach that leaves documentation as "tracks" can help to determine whether to try to patent a claim.

Subsequent discussion focused on the question, "At what point is new technology proven?" The following points were made:

- Applicant/claimant can approach BLM with a method and analysis of profitability.
- Bureau of Mines is a resource to BLM in the area of new technology, and BLM does rely on Bureau of Mines for assistance.
- Other available sources of information include:
    - Private institutions.
    - Section 202 of FLPMA. BLM should ask for budget for Bureau of Mines assistance in developing a data base from the minerals inventory information.
    - SMARA to identify resource zones and keep other development off the land surface.
    - Department of Defense, especially regarding strategic minerals.
    - Mapping systems of Bureau of Mines, California Division of Mines and Geology, and BLM (with MMS).

Participants expressed concern that government activity does not adequately support or encourage the development of locatable minerals.

WORKSHOP PROCEEDINGS

Wednesday, Day III

Jim Evans presented to the workshop his paper on Placer Gold Sampling, Sample Processing, and Evaluation of Results, prepared for the Dredging and Placer Mining Conference, Reno, Nevada, January 13 - 15, 1983 (Appendix 11). He described his procedure as following John Wells' practice.

Taking questions, Evans covered additional information:

- Claimant should expose his best ground for sampling.
- As near as possible, BLM wants to reflect the mining methods the miner is using, or going to use.
- Samples should be collected and stored carefully in plastic and canvas bags.
- Generally, an examiner should take more than one sample.
- Fire assays are not acceptable in placer samples, because the intent is to look for recoverable rather than total gold content.
- Generally, both BLM and USFS will use a miner's own dredge to sample. Examiner should sit on the dredge himself.
- A statistically accurate analysis of a placer sample is difficult. A placer sample should never be split. An examiner will look at and consider the whole operation. Early information from the claimant is helpful and beneficial.
- BLM will accept as proof sales receipts from legitimate purchasers (but not IRS records) for sale of gold and black sands.
- If Claimant indicates that platinum or other minerals are present in black sands, BLM will test for it. Platinum group can be assayed at Bureau of Mines laboratory in Reno.
- BLM will consider the historical data about an area.
- For assay work, BLM uses several labs, including the Bureau of Mines. To use only Bureau of Mines would overload them.
- If, after sampling, claimant finds higher paydirt, he should contact the mineral examiner. Both USFS and BLM indicated willingness, in such circumstances, to reexamine the situation.
- Assay report should be available to claimant unless there is an attorney's report. John Simmons, USFS, said that he would follow through on the suggestion that assay reports be made available to claimants, or that the rationale for withholding them be made explicit.

- Profitability is the key, not the quantity of gold.
- When it is unclear whether a deposit is lode or residual placer, file on both and then decide which way to patent it.

Suggestions from participants:

- Government should do low-cost or free assays.
- If examiner is inefficient/unskilled at dredging, it will adversely affect the sample taken. Examiner should let claimant operate his own equipment.
- Sampling of dredging operations should be conducted in two ways: 1) run tests through a cleaned sluice box for an agreed-upon time; and 2) get down to bedrock.
- Recommend that claimant has input on choice of lab to do the assay.
- Concern that government won't do the types of tests requested by the claimant.
- Miners want the results of the assay test sent to them.
- Problems identified with time frame between sampling and assay report.
  - Time frame is unpredictable and unstandardized.
  - Time frame has been up to a year's duration.
- Corrections to Evans' Placer Gold Sampling paper (Appendix 11):

  Change wording on page 9, item c.4. to reflect that pumping sand maximizes through put, which does not necessarily produce most efficiency.

  Add on page 11, item c.1.d: it is prudent to weight the mercury added both before and after adding.

Overall, participants liked Evans' sampling procedures, and urged that they be adopted as guidelines.

Ken Broadhead: Sample Preparation and Analytical Techniques

Ken Broadhead, Director of Metallurgical Research, U.S. Bureau of Mines, Reno, described his organization's size and capability. In Reno, his staff consists of 23 extremely experienced people, working in eight separate labs. Equipment includes furnaces, spectographs, xray analysis equipment, and IR, ICP, and AA capabilities. Annually, the labs process 9,500 wilderness samples and 6,500 elemental analyses.

The lab works with samples that are small and prepared in the field. Lode samples are crushed 1/4" to 1/8", split into 100 - 200 gram samples, and pulverized.

Broadhead stated that he has never run into an ore that could not be fire assayed. All methods of analysis are subject to error, but fire assay operators are generally more experienced. In response to questions, Broadhead said that a knowledgeable metallurgist can identify platinum in a fire assay. Because there is so little platinum, the platinum weight is generally included in the gold.

The spectograph method can detect what is present in a sample, but is unreliable in determining quantity of material. AA method, which uses 1/2 to 1 gram of sample, can distinguish between platinum and platinum group. Material sent for AA should be sent in small quantity, and the lab should do the sample preparation, as the material separates in transport. Broadhead provided a table showing detection limits (ounces/tons) for gold, silver, platinum, and palladium by different methods of analysis:

	FA	FA/ICP	FA-AA	FA-Spec.	
Au	0.005	0.0002	0.0009	0.002	
Ag	0.05	0.0002	0.0009	-	
Pt	-	.001	.005	.001	
Pd	-	.001	.001	.001	1 Assay ton

In the course of questions and discussions, the following points were made:

- Do multiple samples.
- Use another lab to check assay results. Look for experienced and qualified assayers. Don't trust anybody.
- In borderline cases, government should be obliged to do more tests and assays.
- In a contested claim, a judge may be confused by conflicting assay results. Bring in an expert who can talk knowledgeably to the judge.
- Recognize the statistical inaccuracy in assay results (Appendix 12).
- Appropriate tests for different minerals are as follows:

Gypsum Limestone Calcium Chloride	ICP
Chrome	AA or ICP
Zirconium Tungsten	Xray Florescence
Phosphorus Nonmetallics	Lithium Metaboric Solution

BLM Sampling Procedures

Jim Evans described standard BLM procedures for sampling nonmetallic as follows:

- Knock-off "skin" or weathered surface of representative material. Use channel or continuous chip method. May have to collect 20 pounds in order to get eight-pound sample. Save fist-size representative hand sample.
- Use cloth sample sacks labelled inside and out, then place into a large, heavy-duty plastic bag for protection from the elements.
- Crush and grind the sample in the BLM Folsom Mineral Laboratory to about -40 mesh.
- Split sample into 4 parts: 1 for chemistry (ICP), 1 for xray diffraction and physical properties, 2 for record (locked in lab).
- Saw hand sample; obtain thin section and etch, etc.

For sampling metallic materials:

- Chip or channel sample from discovery and adjacent areas.
- Cut a good channel or continuous chip for minimum mining width; usually 2 lbs per foot of sample for fire assay.
- Put samples in plastic lined bags and then into canvas bags, labelled inside and out. Then place into large, heavy-duty plastic bag for protection from the elements.
- Crush and grind to -50 mesh, then split into 4 parts. Send 2 samples for fire assay or AA, retain 2 splits for record (locked in lab).

In subsequent discussion, the following points were made:

- USFS does not split samples, but does save samples.
- USFS invites mining associations to attend examinations. Concerns or problems should be brought to the attention of the Forest Supervisor.
- USFS priorities for examinations are:

  1. Patent applications.
  2. Land management plans.
  3. Land exchanges.
  4. Occupancy trespass.

- USFS will take another look at borderline situations.
- USFS has doubts about the ability to standardize sampling and report writing.
- USFS is not bound by policies of the Department of Interior.

In Conclusion

Participants expressed appreciation for the workshop; as the time, the gathering of participants, and the agenda and format afforded the opportunities to continue dialogue and communication.

Frustration was expressed by some, however, that this workshop was not connected or linked to the earlier workshop, and that policy and management issues were not within the scope of the workshop.

Participants expressed need for another workshop, preferably within four months, to work on policy issues. Field people and line managers should be included. Although they don't make policy, they do carry it out.

Ed Hastey thanked participants for their involvement and input and promised them a written report of the conference proceedings. He emphasized the importance of submitting comment on the Draft Guidelines, identifying again the deadlines of April 6 at the State BLM Office, and April 30 in Washington, D.C.

In summary, participants emphasized several major ideas in the course of the three-day workshop:

- Standardize field procedures:
  - Between agencies.
  - Examiner to examiner.
  - Regarding the confidentiality or information.
  - Incorporate Evans' guidelines in the Draft Guidelines.
  - Professionalize sampling techniques (use Evans' placer sampling guidelines).
  - Update techniques and knowledge to industry standards (e.g., for sampling, assaying).
- Clarify and communicate interpretations or policies, standards, and guidelines to agency personnel.
  - Develop guidelines for managers' initiation of validity exams.
  - Develop clear interpretation of "Mineral in Character" determination and the 10-acre rule.
  - Develop clearer interpretation of "Excess Reserves."
  - Develop clearer interpretation of "common variety" vs. locatable minerals.
  - Develop guideline about how to regard excess materials which occur in association with locatable minerals. Are they salable? leased?

- Increase dialogue and communication:
  - Hold another workshop for discussion of policy issues.
  - Improve the documentation and file development for validity exams.
  - Develop a method of documenting a claimant's complaints--a way to "leave tracks."
  - Encourage early meetings between examiner and claimant--in the pre-season period.
  - Encourage/support more inter-agency and public-private exchange and sharing of technology.
  - Communicate standardized guidelines and interpretations to examiners and claimants.
- Support and implement a "two-tiered" approach to mineral exams.
- Use other means than validity exams to deal with occupancy-trespass issues.
- Reassess economic analytical procedures for determining "Discovery."
  - Let miners assume more risk.
  - Adjust the "prudent man" concept.
  - Extend "marketability" to include future marketability based on potential changes in the market and in technology.

Appendices

MINERALS AND LAND ACTIONS IN CALIFORNIA - A Guide to Title 43 - Code of Federal Regulations

LAND RESOURCE MANAGEMENT

Segregation of Lands - 43 CFR 2091
Minerals (Nonmineral Entries on Mineral Lands) - 43 CFR 2093

EXCHANGES

Miscellaneous State Exchanges - 43 CFR 2200, 2210, and 2212

LAND WITHDRAWALS AND REVOCATIONS

General Principles and Withdrawal Procedures - 43 CFR 2300, 2350, 2351, and 2353
Public Law 359; Mining In Powersite Withdrawals - 43 CFR 3730, 3731, 3732, 3733, 3734, 3735, 3736, 3737 and 3738
Exploration and Mining, Wilderness Review Program - 43 CFR 3802
Mineral Locations In Stock Driveway Withdrawals - 43 CFR 3815
Prospecting, Mineral Locations, and Mineral Patents Within National Forest Wilderness - 43 CFR 3823
National Park Service Areas - 43 CFR 3826

DISPOSITION: OCCUPANCY AND USE

Homestead (Original) - 43 CFR 2511
Homestead (Enlarged) - 43 CFR 2514
Desert Land Entry - 43 CFR 2520
Indian Allotments - 43 CFR 2530
Color-of-Title - 43 CFR 2540

DISPOSITION: GRANTS

Carey Act Grants - 43 CFR 2610 (none in California)
State Grants - 43 CFR 2621, 2622, 2623, and 2624
Railroad Grants - 43 CFR 2631
FAA Airport Grants - 43 CFR 2640, and 2641

DISPOSITION: SALES

Sales - Federal Land Policy and Management Act - 43 CFR 2710 and 2711
Conveyance of Federally-Owned Mineral Interests - 43 CFR 2720
Recreation and Public Purposes Act (Sales) - 43 CFR 2740 and 2741
Sales (Excess Real and Surplus Property - GSA) - 41 CFR 101-47

Appendix 1

USE: LEASES AND PERMITS

Airport Leases - 43 CFR 2911
Recreation and Public Purpose Act (Lease) - 43 CFR 2912

USE: RIGHTS-OF-WAY

Rights-of-Way, Prinicples and Procedures - 43 CFR 2800
Rights-of-Way, Under the Mineral Leasing Act - 43 CFR 2880

MINERALS MANAGEMENT

Minerals Management; General - 43 CFR 3000
Oil and Gas Leasing - 43 3100
Geothermal Resources Leasing - 43 CFR 3200
Outer Continental Shelf Minerals - 43 CFR 3300
Coal Management - 43 CFR 3400
Leasing Of Minerals Other Than Oil and Gas - 43 CFR 3500

MINERAL MATERIALS DISPOSALS

General - 43 CFR 3600
Limitations - 43 CFR 3601
Trespass - 43 CFR 3602
Community Pits - 43 CFR 3604

MINERAL MATERIALS SALES

General - 43 CFR 3610
Non-Competitive Sales - 43 CFR 3611
Competitive Sales - 43 CFR 3612
Contracts - 43 CFR 3613

FREE USE OF MINERAL MATERIALS

General - 43 CFR 3620
Free Use of Mineral Materials - 43 CFR 3621
Free Use of Petrified Wood - 43 CFR 3622

MULTIPLE USE : MINING

Public Law 167; Act of July 23, 1955 - 43 CFR 3710
Public Law 357: Entry and Location Of Source Material Upon Public Lands Valuable For Coal - 43 CFR 3720
Public Law 359; Mining In Powersite Withdrawals; General - 43 CFR 3730
Public Law 585; Multiple Mineral Development - 43 CFR 3740

MINING CLAIMS UNDER THE GENERAL MINING LAWS

Mining Claims Under the General Mining Laws - 43 CFR 3800
Surface Management - 43 CFR 3809
Surface Use; National Forests - 36 CFR 252
Lands and Minerals Subject to Location - 43 CFR 3810
Disposal Of Reserved Minerals Under the Act of July 17, 1914 - 43 CFR 3813
Disposal of Reserved Minerals Under the Stockraising Homestead Act - 43 CFR 3814
Areas Subject To Special Mining Laws - 43 CFR 3820
Location Of Mining Claims - 43 CFR 3830
Recordation Of Mining Claims; Annual Assessment Work - 43 CFR 3833
Nature and Classes Of Mining Claims - 43 CFR 3840
Assessment Work - 43 CFR 3850
Mineral Patent Applications - 43 CFR 3860
Adverse Claims, Protests and Conflicts - 43 CFR 3870

Section on Specific Mining Claims and Sites:

Lode Claims - 43 CFR 3841, 3861, and 3862
Placer Claims - 43 CFR 3842, 3861, and 3863
Tunnel Sites - 43 CFR 3843
Mill Sites - 43 CFR 3844, 3861, and 3864
Validity - 43 CFR 3831, 3851, and 3852

CODE OF FEDERAL REGULATIONS
TITLE 43 - 3800

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generally not to exceed thirty (30) days. The authorized officer shall require immediate suspension of operations if noncompliance is causing environmental damage.

§ 3827.6 Trespass.

Any mining operations conducted on lands within the Area without an approved plan of operations shall constitute a trespass.

PART 3830—LOCATION OF MINING CLAIMS

Subpart 3831—Rights to Mineral Lands

Sec.

3831.1 Manner of initiating rights under locations.

Subpart 3832—Who May Make Locations

3832.1 Qualifications.

Subpart 3833—Recordation of Mining Claims and Filing Proof of Annual Assessment Work or Notice of Intention to Hold Mining Claims, Mill or Tunnel Sites

3833.0-1 Purpose.
3833.0-2 Objectives.
3833.0-3 Authority.
3833.0-5 Definitions.
3833.1 Recordation of mining claims.
3833.1-1 Manner of recordation—National Park System units established before September 28, 1976.
3833.1-2 Manner of recordation—Federal lands.
3833.1-3 When recordation not required.
3833.2 Evidence of assessment work-notice of intention to hold a claim or site.
3833.2-1 When filing required.
3833.2-2 Form—evidence of assessment work.
3833.2-3 Form—notice of intention to hold claim or site.
3833.2-4 When evidence or notice not required.
3833.3 Notice of transfer of interest.
3833.4 Failure to file.
3833.5 Effect of recording and filing.

Subpart 3831—Rights to Mineral Lands

§ 3831.1 Manner of initiating rights under locations.

Rights to mineral lands, owned by the United States, are initiated by prospecting for minerals thereon, and, upon the discovery of minerals, by locating the lands upon which such discovery has been made. A location is made by (a) staking the corners of the claim, except placer claims described by legal subdivision where State law permits locations without marking the boundaries of the claims on the ground, (b) posting notice of location thereon, and (c) complying with the State laws, regarding the recording of the location in the county recorder's office, discovery work, etc. As supplemental to the United States mining laws there are State statutes relative to location, manner of recording of mining claims, etc., in the State, which should also be observed in the location of mining claims. Information as to State laws can be obtained locally or from State officials.

[38 FR 24650, Sept. 10, 1973]

Subpart 3832—Who May Make Locations

§ 3832.1 Qualifications.

Citizens of the United States, or those who have declared their intention to become such, including minors who have reached the age of discretion and corporations organized under the laws of any State, may make mining locations. Agents may make locations for qualified locators.

[35 FR 9750, June 13, 1970]

Subpart 3833—Recordation of Mining Claims and Filing Proof of Annual Assessment Work or Notice of Intention to Hold Mining Claims, Mill or Tunnel Sites

SOURCE: 42 FR 5300, Jan. 27, 1977, unless otherwise noted.

§ 3833.0–1 Purpose.

One purpose of these regulations is to establish procedures for the recordation in the proper BLM office of unpatented mining claims, mill sites, or tunnel sites on Federal lands, and for the filing in the same office of evidence of performance of annual assessment work or of a notice of intention to hold an unpatented mining claim. Another purpose is to notify the proper BLM office of the transfer of an interest in unpatented mining claims, mill sites or tunnel sites.

§ 3833.0-2 Objectives.

An objective of these regulations is to determine the number and location of unpatented mining claims, mill sites, or tunnel sites located on Federal lands to assist in the management of those lands and the mineral resources therein. Other objectives are to remove the cloud on the title to these lands because they are subject to mining claims that may have been abandoned and to keep the BLM abreast of transfers of interest in unpatented mining claims, mill sites or tunnel sites. These regulations are not intended to supersede or replace existing recording requirements under State law, except when specifically changed by the provisions of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701), and are not intended to make the BLM office the official recording office for all ancillary documents (wills, liens, judgments, etc.) involving an unpatented mining claim, mill site or tunnel site.

§ 3833.0-3 Authority.

(a) Subsections (a) and (b) of section 314 of the Act require the recordation of unpatented mining claims and the filing of information concerning annual assessment work performed or a notice of intention to hold such a claim in the proper BLM office within specified time periods. Subsection (c) sets forth the consequences of the failure to file such information or documents within the time limits prescribed.

(b) Section 8 of the Act of September 28, 1976 (16 U.S.C. 1901-1912), requires that all unpatented mining claims within the boundaries of the National Park System shall be recorded with the Secretary within one year after the date of the Act and provides penalties for failure to record.

(c) Section 2319 of the Revised Statutes (30 U.S.C. 22) provides that the exploration, location, and purchase of valuable mineral deposits shall be "under regulations prescribed by law," and section 2478 of the Revised Statutes, as amended (43 U.S.C. 1201), provides that those regulations will be issued by the Secretary.

(d) The Secretary has general responsibility and authority concerning public lands under 43 U.S.C. 2 and section 310 of the Act.

(e) The Act of August 31, 1951 (31 U.S.C. 483a) and section 304(a) of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1734).

[42 FR 5300, Jan. 27, 1977, as amended at 44 FR 9722, Feb. 14, 1979]

§ 3833.0-5 Definitions.

As used in this subpart:

(a) "The Act" means the Federal Land Policy and Management Act of 1976 (Pub. L. 94-579; 90 Stat. 2743).

(b) "Unpatented mining claim" means a lode mining claim or a placer mining claim located under the General Mining Law of 1872, as amended (30 U.S.C. 21-54), for which a patent under 30 U.S.C. 29 and 34 CFR Part 3860 has not been issued.

(c) "Mill site" means any land located under 30 U.S.C. 42.

(d) "Tunnel site" means a tunnel located pursuant to 30 U.S.C. 27.

(e) "Owner" means the person who is the holder of the right to sell or transfer all or any part of the unpatented mining claim, mill or tunnel site. The owner shall be identified in the instruments required by these regulations by a notation on those instruments.

(f) "Federal lands" means any lands or interest in lands owned by the United States, except lands within units of the National Park System, which are subject to location under the General Mining Law of 1872, supra, including, but not limited to, those lands within forest reservations in the National Forest System and wildlife refuges in the National Wildlife Refuge System.

(g) "Proper BLM office" means the Bureau of Land Management office listed in § 1821.2-1(d) of this title as having jurisdiction over the area in which the claims or sites are located.

(h) "Date of location" or "located" means the date determined by State law in the local jurisdiction in which the unpatented mining claim, mill or tunnel site is situated.

(i) "Copy of the official record of the notice of certificate of location" means a legible reproduction or duplicate, except microfilm, of the original instrument of recordation of an unpatented mining claim, mill or tunnel site which was or will be filed in the local jurisdiction where the claim or site is located or other evidence, acceptable to the proper BLM office, of such instrument of recordation. It also includes an exact reproduction, duplicate or other acceptable evidence, except microfilm, of an amended instrument which may change or alter the description of the claim or site.

[42 FR 5300, Jan. 27, 1977, as amended at 44 FR 9722, Feb. 14, 1979]

§ 3833.1 Recordation of mining claims.

§ 3833.1-1 Manner of recordation—National Park System units established before September 28, 1976.

Any unpatented mining claim, mill site or tunnel site in any National Park System unit in existence on September 28, 1976, which was not recorded on or before September 28, 1977, in accordance with the Notice of October 20, 1976 [41 FR 46357] or 36 CFR 9.5 is, pursuant to section 8 of the Act of September 28, 1976 (16 U.S.C. 1907), conclusively presumed to be abandoned and shall be void.

[44 FR 20429, Apr. 5, 1979]

§ 3833.1-2 Manner of recordation—Federal lands.

(a) The owner of an unpatented mining claim, mill site or tunnel site located on or before October 21, 1976, on Federal lands, excluding lands within units of the National Park System established before September 28, 1976, but including lands within a national monument administered by the United States and Fish and Wildlife Service or the United States Forest Service, shall file (file shall mean being received and date stamped by the proper BLM Office) on or before October 22, 1979, in the proper BLM Office, a copy of the official record of the notice or certificate of location of the claim or site filed under state law. If state law does not require the recordation of a notice or certificate of location containing the information in paragraph (c) of this section shall be filed. Where the claim so recorded lies within a unit of the National Park System, a copy of the documents filed shall be provided to the Superintendent of the appropriate unit by the Bureau of Land Management.

(b) The owner of an unpatented mining claim, mill site, or tunnel site located after October 21, 1976, on Federal land shall file (file shall mean being received and date stamped by the proper BLM office), within 90 days after the date of location of that claim in the proper BLM office a copy of the official record of the notice or certificate of location of the claim or site filed under state law or, if the state law does not require the recordation of a notice or certificate of location of the claim or site, a certificate of location containing the information in paragraph (c) of this section. Where the claim so recorded lies within a unit of the National Park System, a copy of the documents filed shall be provided to the Superintendent of the appropriate unit by the Bureau of Land Management.

(c) The copy of the notice or certificates filed in accordance with paragraphs (a) and (b) of this section shall be supplemented by the following additional information unless it is included in the copy:

(1) The name or number of the claim or site, or both, if the claim or site has both;

(2) The name and current mailing address, if known, of the owner or owners of the claim or site;

(3) The type of claim or site;

(4) The date of location;

(5) For all claims or sites located on surveyed or unsurveyed lands, a description shall be furnished. This description shall recite, to the extent possible, the section(s), the approximate location of all or any part of the claim or site to within a 160 acre quadrant of the section (quarter section) or sections, if more than one is involved. In addition, there must be furnished the township, range, meridian and State obtained from an official survey plat or other U.S. Government map showing either the surveyed or pro-

tracted U.S. Government grid, whichever is applicable;

(6) For all claims or sites located on surveyed or unsurveyed land, either a topographic map published by the U.S. Geological Survey on which there shall be depicted the location of the claim or site, or a narrative or sketch describing the claim or site with reference by appropriate tie to some topographic, hydrographic or man-made feature. Such map, narrative description or sketch shall set forth the boundaries and positions of the individual claim or site with such accuracy as will permit the authorized officer of the agency administering the lands or the mineral interests in such lands to identify and locate the claim on the ground. More than one claim or site may be shown on a single map or described in a single narrative or sketch if they are located in the same general area, so long as the individual claims or sites are clearly identified; and

(7) In place of the requirements of paragraphs (c)(5) and (6) of this section, an approved mineral survey may be supplied.

(8) Nothing in the requirements for a map and description found in this section shall require the owner of a claim or site to employ a professional surveyor or engineer.

(d) Each claim or site filed shall be accompanied by a one time $5 service fee which is not returnable. A notice or certificate of location shall not be accepted if it is not accompanied by the service fee and shall be returned to the owner.

[42 FR 5300, Jan 27, 1977, as amended at 44 FR 9722, Feb. 14, 1979; 44 FR 20430, Apr. 5, 1979]

§ 3833.1-3 When recordation not required.

If the owner of an unpatented mining claim or mill site had on file in the proper BLM office on October 21, 1976, an application for a mineral patent which contains the documents and information required in § 3833.1-2 of this title, except if the application is for a patent for a placer claim which is located on surveyed lands and conforms to legal subdivisions, such applicant need not comply with the requirements of § 3833.1-2(c)(6) of this title, or if the owner of an unpatented mining claim or mill site located on or before October 21, 1976, files in the proper BLM office an application for a mineral patent, as described above, on or before October 22, 1979, the filing of the application shall be deemed full compliance with the recordation requirements of section 314(b) of the Act and the owner of that claim or site shall be exempt from the filing requirements of § 3833.1. For purposes of complying with the requirement of § 3833.2-1(a) of this title, upon notification to the claimant, the date of recordation in the proper BLM office shall be October 21, 1976, for claims and sites included in mineral patent applications on file as of that date. The date on which the application was actually filed shall be the date of recordation for all other claims and sites.

[44 FR 9722, Feb. 14, 1979]

§ 3833.2 Evidence of assessment work-notice of intention to hold a claim or site.

[44 FR 9723, Feb. 14, 1979]

§ 3833.2-1 When filing required.

(a) The owner of an unpatented mining claim located on Federal lands on or before October 21, 1976, shall file in the proper BLM office on or before October 22, 1979, or on or before December 30 of each calendar year following the calendar year of such recording, which ever date is sooner, evidence of annual assessment work performed during the preceding assessment year or a notice of intention to hold the mining claim.

(b) (1) Except as provided in paragraph (b)(2) of this section, the owner of an unpatented mining claim, mill site or tunnel site located within any unit of the National Park System shall file before October 22, 1979, and on or before December 30 of each calendar year after the year of recording (See 36 CFR 9.5), a notice of intention to hold the mining claim, mill site or tunnel site. Such notice shall be in the form prescribed by § 3833.2-3 of this title and shall be filed with the proper BLM office. A copy of each such filing shall be provided to the Superintendent of the appropriate unit by the Bureau of Land Management.

(2) Where a claimant has received a permit under 36 CFR 9.5 to do assessment work on a claim in a unit of the National Park System, the claimant may file with the Bureau of Land Management in lieu of the notice required by paragraph (b)(1) of this section, evidence of assessment work in the form prescribed in § 3833.2-2 of this title. A copy of such filing shall be provided to the Superintendent of the appropriate unit by the Bureau of Land Management.

(c) The owner of an unpatented mining claim located on Federal lands excluding lands within a unit of the National Park System, but including lands within a national monument administered by the United States Fish and Wildlife Service or the United States Forest Service, after October 21, 1976, shall, on or before December 30 of each calendar year following the calendar year in which such claim was located, file in the proper BLM office evidence of annual assessment work performed during the previous assessment year or a notice of intention to hold the mining claim.

(d) The owner of a mill or tunnel site located on Federal lands, excluding lands within a unit of the National Park System but including lands within a national monument administered by the United States Fish and Wildlife Service or the United States Forest Service, shall file in the proper BLM office on or before December 30 of each year following the year of recording pursuant to § 3833.1-2 of this title, a notice of intention to hold the mill or tunnel site.

[44 FR 9723, Feb. 14, 1979, as amended at 44 FR 20430, Apr. 5, 1979]

§ 3833.2-2 Form—evidence of assessment work.

Evidence of annual assessment work shall be in the form of either;

(a) An exact legible reproduction or duplicate, except microfilm, of the affidavit of assessment work performed which was or will be filed for record pursuant to section 314(a) of the Act in the local jurisdiction of the State where the claim or group of claims is located and recorded setting forth the following additional information:

(1) The serial number assigned to each claim by the authorized officer upon filing of the notice or certificate of location or patent application in the proper BLM office. Filing the serial number shall comply with the requirement in the act to file an additional description of the claim.

(2) Any change in the mailing address, if known, of the owner or owners of the claim or claims; or

(b) An exact legible reproduction or duplicate, except microfilm, of the detailed report concerning geological, geochemical and geophysical surveys provided for by the Act of September 2, 1958 (30 U.S.C. 28-1) and filed for record pursuant to section 314(a)(1) of the Act in the local jurisdiction of the State where the claim or group of claims is located and recorded setting forth the following additional information:

(1) The serial number assigned to each claim by the authorized officer upon filing in the proper BLM office of a copy of the official record of the notice or certificate of location or patent application; and

(2) Any change in the mailing address, if known, of the owner or owners of the claim.

[42 FR 5300, Jan. 27, 1977, as amended at 44 FR 9723, Feb. 14, 1979]

§ 3833.2-3 Form—notice of intention to hold claim or site.

(a) A notice of intention to hold a mining claim or group of mining claims shall be in the form of either (1) an exact legible reproduction or duplicate, except microfilm, of a letter signed by the owner of a claim or his agent filed for record pursuant to section 314(a)(1) of the Act in the local jurisdiction of the State where the claim is located and recorded setting forth the following information:

(1) The serial number assigned to each claim by the authorized officer upon filing in the proper BLM office of a copy of the notice or certificate of location. Filing the serial number shall comply with the requirement in the act to file an additional description of the claim;

(ii) Any change in the mailing address, if known, of the owner or owners of the claim;

(iii) A statement that the claim is held and claimed by the owner(s) for the valuable mineral contained therein;

(iv) A statement that the owner(s) intend to continue development of the claim; and

(v) The reason that the annual assessment work has not been performed or an affidavit of assessment work performed or a detailed report of geological, geochemical or geophysical survey under § 3833.2-2, has not been filed or

(2) The decision on file in the proper BLM office which granted a deferment of the annual assessment work required by 30 U.S.C. 28, so long as the decision is in effect on the date required for filing a notice of intention to hold a mining claim under § 3833.2-1 of this title or a petition for deferment, a copy of which has been recorded with the appropriate local office, which has not been acted on by the authorized officer.

(b) A notice of intention to hold a mill or tunnel site(s) shall be in the form of a letter signed by the owner or owners of such sites or their agent setting forth the following information:

(1) The serial number assigned to each site by the authorized officer upon filing in the proper BLM office of a copy of the official record of the notice or certificate of location;

(2) Any change in the mailing address, if known, of the owner or owners of the site(s); and

(3) In the case of a mill site, a statement that a claim-related site will continue to be used for mining or milling purposes or that an independent mill site will continue to be used for the purposes of a quartz mill or reduction works; or

(4) In the case of a tunnel site, a statement that the owner(s) will continue to prosecute work on the tunnel with reasonable diligence for the discovery or development of the vein or lode.

[44 FR 9723, Feb. 14, 1979]

§ 3833.2-4 When evidence or notice not required.

Evidence of annual assessment work performed or a notice of intention to hold a mining claim need not be filed on unpatented mining claims or mill sites for which application for mineral patent which complies with 43 CFR Part 3860 has been filed and final certificate has been issued. (See 43 CFR 3851.5). The filing of an application and issuance of the final certificate will be deemed full compliance with the requirements of section 314(a) of the Act and the owner of that claim or site shall be exempt from the filing requirements of § 3833.2-1.

§ 3833.3 Notice of transfer of interest.

(a) Whenever the owner of an unpatented mining claim, mill site or tunnel site, which has been recorded in accordance with § 3833.1-2, sells, assigns, or otherwise conveys all or any part of his interest in the claim, his transferee shall file in the proper BLM office within 60 days after the completion of the transfer the following information:

(1) The serial number assigned to the claim by the authorized officer upon filing of a copy of the official record of the notice or certificate of location in the proper BLM office; and

(2) The name and mailing address of the person(s) to whom an interest in the claim has been sold, assigned, or otherwise transferred.

(b) Whenever any person acquires an interest through inheritance in an unpatented mining claim, mill site, or tunnel site recorded in accordance with § 3833.1, he shall file in the proper BLM office within 60 days after completion of the transfer the information required by paragraph (a) of this section.

§ 3833.4 Failure to file.

(a) The failure to file an instrument required by §§ 3833.1-2 (a), (b), and 3833.2-1 of this title within the time periods prescribed therein, shall be deemed conclusively to constitute an abandonment of the mining claim, mill or tunnel site and it shall be void.

(b) The fact that an instrument is filed in accordance with other laws permitting filing or recording thereof and is defective or not timely filed for record under those laws, or the fact that an instrument is filed for record under this subpart by or on behalf of some, but not all of the owners of the mining claim, mill site, or tunnel site, shall not be considered failure to file an instrument under this subpart.

[42 FR 5200, Jan. 27, 1977, as amended at 44 FR 9723, Feb. 14, 1979]

§ 3833.5 Effect of recording and filing.

(a) Recordation or application involving an unpatented mining claim, mill site, or tunnel site by itself shall not render valid any claim which would not be otherwise valid under applicable law and does not give the owner any rights he is not otherwise entitled to by law.

(b) Nothing in this subpart shall be construed as a waiver of the assessment work requirements of section 2324 of the Revised Statutes, as amended (30 U.S.C. 28). Compliance with the requirements of this subpart shall be in addition to and not a substitute for compliance with the requirements of section 2324 of the Revised Statutes and with laws and regulations issued by any State or other authority relating to performance of annual assessment work.

(c) Filing of instruments pertaining to mining claims under other Federal law with the BLM or other Federal agency shall not excuse the filings required by this subpart and filings under this subpart shall not excuse the filing of instruments pertaining to mining claims under any other Federal law, except that filing a notice or certificate of location or an affidavit of annual assessment work under this subpart which is marked by the owner as also being filed under the Act of April 8, 1948 (62 Stat. 162) or the Act of August 11, 1955 (30 U.S.C. 621-625), will satisfy the recording requirement for O & C lands under 43 CFR Subpart 3821 and Pub. L. 359 lands under 43 CFR Part 3730, or as provided in § 3833.2-1(b) of this title.

(d) In the case of any action or contest affecting an unpatented mining claim, mill or tunnel site, only those owners who have recorded their claim or site pursuant to § 3833.1-2 or filed a notice of transfer of interest pursuant to § 3833.3, shall be considered by the United States as parties whose rights are affected by such action or contest and shall be personally notified. All methods reasonably calculated to insure that those parties receive actual notice of the action or contest shall be employed. If those methods are not successful, the interested parties shall be notified by publication in accordance with 43 CFR 4.450. Owners who have not recorded a claim or site or filed a notice of transfer shall not be personally served and will be bound by any contest proceeding even though they have not been personally served. This section applies to all unpatented mining claims, mill or tunnel sites located after October 21, 1976, and shall apply to such claims or sites located on or before October 21, 1976, only after they have been recorded pursuant to § 3833.1-2 of this title.

(e) Actual notice of an unpatented mining claim or mill or tunnel site by any employee or officer of the United States shall not exempt the claim or site from the requirements of this subpart.

(f) Failure of the government to notify an owner upon his filing or recording of a claim or site under this subpart that such claim or site is located on lands not subject to location or otherwise void for failure to comply with Federal or State law or regulations shall not prevent the government from later challenging the validity of or declaring void such claim or site in accordance with due process of law.

(g) Any person who files an instrument required by these regulations knowing the same to contain any false, fictitious or fraudulent statement or entry, may be subject to criminal penalties under 18 U.S.C. 1001.

[42 FR 5200, Jan. 27, 1977, as amended at 44 FR 9723, Feb. 14, 1979]

PART 3840—NATURE AND CLASSES OF MINING CLAIMS

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Subpart 3840—Types of Claims

§ 3840.1 Classes of mining claims.

Mining claims are of two distinct classes: lode claims and placers.

[35 FR 9750, June 13, 1970]

Subpart 3841—Lode Claims

SOURCE: 35 FR 9750, June 13, 1970, unless otherwise noted.

§ 3841.1 Lodes located previous to May 10, 1872.

The status of lode claims located or patented previous to May 10, 1872, is not changed with regard to their extent along the lode or width of surface; but the claim is enlarged by 2322 and 2328, R.S. (30 U.S.C. 26, 33), by investing the locator, his heirs or assigns, with the right to follow, upon the conditions stated therein, all veins, lodes, or ledges, the top or apex of which lies inside of the surface lines of his claim.

§ 3841.2 Lodes must not have been adversely claimed.

It is to be distinctly understood that the law limits the possessory right to veins, lodes, or ledges, other than the one named in the original location, to such as were not adversely claimed on May 10, 1872, and that where such other vein or ledge was so adversely claimed at that date the right of the party so adversely claiming is in no way impaired by the act of that date.

§ 3841.3 Discovery.

§ 3841.3-1 Discovery required before location.

No lode claim shall be located until after the discovery of a vein or lode within the limits of the claim, the object of which provision is evidently to prevent the appropriation of presumed mineral ground for speculative purposes, to the exclusion of bona fide prospectors, before sufficient work has been done to determine whether a vein or lode really exists.

§ 3841.3-2 Discovery work.

The claimant should, therefore, prior to locating his claim, unless the vein can be traced upon the surface, sink a shaft or run a tunnel or drift to a sufficient depth therein to discover and develop a mineral-bearing vein, lode, or crevice; should determine, if possible, the general course of such vein in either direction from the point of discovery, by which direction he will be governed in marking the boundaries of his claim on the surface.

§ 3841.4 Describing locations.

§ 3841.4-1 Length of lode claims.

From and after May 10, 1872, any person who is a citizen of the United States, or who has declared his intention to become a citizen, may locate, record, and hold a mining claim of 1,500 linear feet along the course of any mineral vein or lode subject to location; or an association of persons, severally qualified as above, may make joint location of such claim of 1,500 feet, but in no event can a location of a vein or lode made after May 10, 1872, exceed 1,500 feet along the course thereof, whatever may be the number of persons composing the association.

§ 3841.4-2 Width of lode claims.

No lode located after May 10, 1872, can exceed a parallelogram 1,500 feet in length by 600 feet in width, but whether surface ground of that width can be taken depends upon the local regulations or State or Territorial laws in force in the several mining districts. No such local regulations or State or Territorial laws shall limit a vein or lode claim to less than 1,500 feet along the course thereof, whether the location is made by one or more persons, nor can surface rights be limited to less than 50 feet in width unless adverse claims existing on May 10, 1872, render such lateral limitation necessary.

§ 3841.4-3 Extent of surface ground.

With regard to the extent of surface ground adjoining a vein or lode, and claimed for the convenient working thereof, the Act of May 10, 1872, provides that the lateral extent of locations of veins or lodes made after said date shall in no case exceed 300 feet on each side of the middle of the vein at the surface, and that no such surface rights shall be limited by any mining regulations to less than 25 feet on each side of the middle of the vein at the surface, except where adverse rights existing on May 10, 1872, may render such limitation necessary; the end lines of such claims to be in all cases parallel to each other. Said lateral measurements cannot extend beyond 300 feet on either side of the middle of the vein at the surface, or such distance as is allowed by local laws. For example: 400 feet cannot be taken on one side and 200 feet on the other. If, however, 300 feet on each side are allowed, and by reason of prior claims but 100 feet can be taken on one side, the locator will not be restricted to less than 300 feet on the other side; and when the locator does not determine by exploration where the middle of the vein at the surface is, his discovery shaft must be assumed to mark such point.

§ 3841.4-4 Defining of locations.

Section 5 of the Act of May 10, 1872, now section 2324, Revised Statutes (30 U.S.C. 28), requires that "the location must be distinctly marked on the ground so that its boundaries can be readily traced." Locators can not exercise too much care in defining their locations at the outset, inasmuch as section 5 of the Act of May 10, 1872 (17 Stat. 92; 30 U.S.C. 28) requires that all records of mining locations made subsequent to the date of said Act shall contain the name or names of the locators, the date of the location, and such a description of the claim or claims located, by reference to some natural object or permanent monument, as will identify the claim.

§ 3841.4-5 Location notice; monumenting.

(a) The location notice should give the course and distance as nearly as practicable from the discovery shaft on the claim to some permanent, wellknown points or objects, such, for instance, as stone monuments, blazed trees, the confluence of streams, point of intersection of well-known gulches, ravines, or roads, prominent buttes, hills, etc., which may be in the immediate vicinity, and which will serve to perpetuate and fix the locus of the claim and render it susceptible of identification from the description thereof given in the record of locations in the district, and should be duly recorded.

(b) In addition to the foregoing data, the claimant should state the names of adjoining claims, or, if none adjoin, the relative positions of the nearest claims; should drive a post or erect a monument of stones at each corner of his surface ground, and at the point of discovery or discovery shaft should fix a post, stake, or board, upon which should be designated the name of the lode, the name or names of the locators, the number of feet claimed, and in which direction from the point of discovery, it being essential that the location notice filed for record, in addition to the foregoing description, should state whether the entire claim of 1,500 feet is taken on one side of the point of discovery, or whether it is partly upon one and partly upon the other side thereof, and in the latter case, how many feet are claimed upon each side of such discovery point. As to the importance of monuments, and as to their paramount authority, see the Act of April 28, 1904 (33 Stat. 545; 30 U.S.C. 34), which amended R.S. 2327.

§ 3841.4-6 Recording of location notice.

The location notice must be filed for record in all respects as required by the State or territorial laws, and local rules and regulations, if there by any.

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Subpart 3842—Placer Claims

SOURCE: 35 FR 9751, June 13, 1970, unless otherwise noted.

§ 3842.1 Placer claims; general.

§ 3842.1-1 Discovery.

But one discovery of mineral is required to support a placer location, whether it be of 20 acres by an individual, or of 160 acres or less by an association of persons.

§ 3842.1-2 Maximum allowable acreage.

(a) By R.S. 2330 (30 U.S.C. 36), it is declared that no location of a placer claim made after July 9, 1870, shall exceed 160 acres for any one person or association of persons, which location shall conform to the United States surveys.

(b) R.S. 2331 (30 U.S.C. 35) provides that all placer-mining claims located after May 10, 1872, shall conform as nearly as practicable with the United States system of public land surveys and the rectangular subdivisions of such surveys, and such locations shall not include more than 20 acres for each individual claimant.

(c) The foregoing provisions of law are construed to mean that after July 9, 1870, no location of a placer claim can be made to exceed 160 acres, whatever may be the number of locators associated together, or whatever the local regulations of the district may allow; and that from and after May 10, 1872, no location can exceed 20 acres for each individual participating therein; that it, a location by two persons can not exceed 40 acres, and one by three persons can not exceed 60 acres.

§ 3842.1-3 Locations authorized in 10-acre units.

By R.S. 2330 (30 U.S.C. 36), authority is given for subdividing 40-acre legal subdivisions into 10-acre tracts. These 10-acre tracts should be considered and dealt with as legal subdivisions, and an applicant having a placer claim which conforms to one or more of such 10-acre tracts, contiguous in case of two or more tracts, may make entry thereof, after the usual proceedings, without further survey or plat.

§ 3842.1-4 Manner of describing 10-acre units.

A 10-acre subdivision may be described, for instance if situated in the extreme northeast of the section, as the "NE. ¼ of the NE. ¼ of the NE. ¼" of the section, or, in like manner, by appropriate terms, wherever situated; but in addition to this description, the notice must give all the other data required in a mineral application, by which parties may be put on inquiry as to the land sought to be patented. The proofs submitted with applications must show clearly the character and extent of the improvements upon the premises.

§ 3842.1-5 Conformity of placer claims to the public land surveys.

(a) All placer-mining claims located after May 10, 1872, shall conform as near as practicable with the United States system of public-land surveys and the rectangular subdivisions of such surveys, whether the locations are upon surveyed or unsurveyed lands.

(b) Conformity to the public-land surveys and the rectangular subdivisions thereof will not be required where compliance with such requirement would necessitate the placing of the lines thereof upon other prior located claims or where the claim is surrounded by prior locations.

(c) Where a placer location by one or two persons can be entirely included within a square 40-acre tract, by three or four persons within two square 40-acre tracts placed end to end, by five or six persons within three square 40-acre tracts, and by seven or eight persons within four square 40-acre tracts, such locations will be regarded as within the requirements where strict conformity is impracticable.

(d) Whether a placer location conforms reasonably with the legal subdivisions of the public survey is a question of fact to be determined in each case, and no location will be passed to patent without satisfactory evidence in this regard. Claimants should bear in mind that it is the policy of the Government to have all entries whether of agricultural or mineral lands as compact and regular in form as reasonably practicable, and that it will not permit or sanction entries or locations which cut the public domain into long narrow strips or grossly irregular or fantastically shaped tracts. (Snow Flake Fraction Placer, 37 L.D. 250.)

§ 3842.2 Building-stone placers.

The Act of August 4, 1892 (27 Stat. 348; 30 U.S.C. 161), extends the mineral land laws so as to bring lands chiefly valuable for building stone within the provisions of said laws.

(a) Common varieties of building stone are, since the Act of July 23, 1955 (69 Stat. 367; 30 U.S.C. 611) no longer locatable under the mining laws.

(b) Uncommon varieties of building stone continue to be subject to the building stone placer supplement to the mining law, 30 U.S.C. 161.

§ 3842.3 Saline placers.

(a) Under the Act approved January 31, 1901 (31 Stat. 745; 30 U.S.C. 162), extending the mining laws to saline lands, the provisions of the law relating to placer-mining claims are extended to all States so as to permit the location and purchase thereunder of all unoccupied public lands containing salt springs, or deposits of salt in any form, and chiefly valuable therefor, with the proviso, "That the same person shall not locate or enter more than one claim hereunder." The saline placer act was superseded by the Mineral Leasing Act of February 25, 1920 (41 Stat. 437; 30 U.S.C. 181 et seq.), whereby saline (sodium) deposits were made subject to disposal by leases instead of mining locations.

(b) Rights obtained by location under the placer-mining laws are assignable, and the assignee may make the entry in his own name; so, under this act a person holding as assignee may make entry in his own name: *Provided*, That he has not held under this act, at any time, either as locator or entryman, any other lands; his right is exhausted by having held under this act any particular tract, either as locator or entryman, either as an individual or as a member of an association. It follows, therefore, that no application for patent or entry, made under this act, shall embrace more than one single location.

(c) In order that the conditions imposed by the proviso, as set forth in paragraph (b) of this section, may duly appear, the application for patent must contain or be accompanied by a specific statement by each person whose name appears therein that he never has, either as an individual or as a member of an association, located or entered any other lands under the provisions of this act. The application for patent should also be accompanied by a showing, fully disclosing the qualifications as defined by the proviso, of the applicants' predecessors in interest.

§ 3842.4 Petroleum placers.

The Act of February 11, 1897 (29 Stat. 526), provides for the location and entry of public lands chiefly valuable for petroleum or other mineral oils, and entries of that nature made prior to the passage of said act are to be considered as though made thereunder. This Act was superseded by the

Mineral Leasing Act of February 25, 1920 (41 Stat. 437).

Subpart 3843—Tunnel Sites

Source: 35 FR 9752, June 13, 1970, unless otherwise noted.

§ 3843.1 Possessory right of tunnel proprietor.

The effect of R.S. 2323 (30 U.S.C. 27), is to give the proprietors of a mining tunnel run in good faith the possessory right to 1,500 feet of any blind lodes cut, discovered, or intersected by such tunnel, which were not previously known to exist within 3,000 feet from the face or point of commencement of such tunnel, and to prohibit other parties, after the commencement of the tunnel, from prospecting for and making locations of lodes on the line thereof and within said distance of 3,000 feet, unless such lodes appear upon the surface or were previously known to exist. The term "face," as used in said sections, is construed and held to mean the first working face formed in the tunnel, and to signify the point at which the tunnel actually enters cover; it being from this point that the 3,000 feet are to be counted upon which prospecting is prohibited as aforesaid. R.S. 2323 provides: "Failure to prosecute the work on the tunnel for six months shall be considered as an abandonment of the right to all undiscovered veins on the line of such tunnel."

§ 3843.2 Location of tunnel claims.

To avail themselves of the benefits of this provision of law, the proprietors of a mining tunnel will be required, at the time they enter cover as aforesaid, to give proper notice of their tunnel location by erecting a substantial post, board, or monument at the face or point of commencement thereof, upon which should be posted a good and sufficient notice, giving the names of the parties or company claiming the tunnel right; the actual or proposed course or direction of the tunnel, the height and width thereof, and the course and distance from such face or point of commencement to some permanent well-known objects in the vicinity by which to fix and determine the locus in manner heretofore set forth applicable to locations of veins or lodes, and at the time of posting such notice they shall, in order that miners or prospectors may be enabled to determine whether or not they are within the lines of the tunnel, establish the boundary lines thereof, by stakes or monuments placed along such lines at proper intervals, to the terminus of the 3,000 feet from the face or point of commencement of the tunnel, and the lines so marked will define and govern as to specific boundaries within which prospecting for lodes not previously known to exist is prohibited while work on the tunnel is being prosecuted with reasonable diligence.

§ 3843.3 Recording of notices.

A full and correct copy of such notice of location defining the tunnel claim must be filed for record with the mining recorder of the district, to which notice must be attached the sworn statement or declaration of the owners, claimants, or projectors of such tunnel, setting forth the facts in the case; stating the amount expended by themselves and their predecessors in interest in prosecuting work thereon; the extent of the work performed, and that it is bona fide their intention to prosecute work on the tunnel so located and described with reasonable diligence for the development of a vein or lode, or for the discovery of mines, or both, as the case may be. This notice of location must be duly recorded, and, with the said sworn statement attached, kept on the recorder's files for future reference.

Subpart 3844—Millsites

§ 3844.0-3 Authority.

The location and patenting of lands for millsite purposes is authorized by R.S. 2337 as amended by the Act of March 18, 1960. The Act, 30 U.S.C. 42, reads as follows:

> Patents for nonmineral lands.
>
> (a) Where nonmineral land not contiguous to the vein or lode is used or occupied by the proprietor of such vein or lode for mining or milling purposes, such nonadjacent surface ground may be embraced, and included in an application for a patent for such vein or lode, and the same may be patented therewith, subject to the same preliminary requirements as to survey and notice as are applicable to veins or lodes; but no location made of such nonadjacent land shall exceed five acres, and payment for the same must be made at the same rate as fixed by sections 21-24, 26-28, 29, 30, 33-48, 50-52, and 71-76 of this title for the superficies of the lode. The owner of a quartz mill or reduction works, not owning a mine in connection therewith, may also receive a patent for his mill site, as provided in this section.
>
> (b) Where nonmineral land is needed by the proprietor of a placer claim for mining, milling, processing, beneficiation, or other operations in connection with such claim, and is used or occupied by the proprietor for such purposes, such land may be included in an application for a patent for such claim, and may be patented therewith subject to the same requirements as to survey and notice as are applicable to placers. No location made of such nonmineral land shall exceed five acres and payment for the same shall be made at the rate applicable to placer claims which do not include a vein or lode. (As amended Mar. 18, 1960, Pub. Law 86-390, 74 Stat. 7.)

[35 FR 9752, June 13, 1970]

§ 3844.1 Required use.

A millsite is required to be used or occupied distinctly and explicitly for mining or milling purposes in connection with the lode or placer claim with which it is associated. A custom or independent millsite may be located for the erection and maintenance of a quartz mill or reduction works.

[35 FR 9752, June 13, 1970]

PART 3850—ASSESSMENT WORK

Subpart 3851—Assessment Work; General

Sec.
3851.1 Assessment work.
3851.1-1 Expenditures.
3851.2 Inclusion of surveys in assessment work.
3851.3 Effect of failure to perform assessment work.
3851.4 Failure of a co-owner to contribute to annual assessment work.
3851.5 Assessment work not required after patent certificate.

Subpart 3852—Deferment of Assessment Work

3852.0-3 Authority.
Sec.
3852.1 Conditions under which deferment may be granted.
3852.2 Filing of petition for deferment, contents.
3852.3 Notice of action on petition to be recorded.
3852.4 Period for which deferment may be granted.
3852.5 When deferred assessment work is to be done.

Subpart 3851—Assessment Work; General

Source: 35 FR 9753, June 13, 1970, unless otherwise noted.

§ 3851.1 Assessment work.

In order to hold the possessory right to a lode or placer location made after May 10, 1872, not less than $100 worth of labor must be performed or improvements made thereon annually. The period within which the work required to be done shall commence at 12 o'clock meridian on the 1st day of September succeeding the date of location of each claim. Where a number of contiguous claims are held in common, the aggregate expenditure that would be necessary to hold all the claims may be made on any one claim. Cornering locations are held not to be contiguous.

§ 3851.1-1 Expenditures.

The annual expenditure in the amount of $100, required by section R.S. 2324 (30 U.S.C. 28), must be made upon placer as well as lode locations.

§ 3851.2 Inclusion of surveys in assessment work.

(a) In addition to the several types of work that may fulfill the annual labor requirement, the requirement can also be satisfied by conducting geological, geochemical, and geophysical surveys. Pub. L. 85-876, Act of September 2, 1958 (72 Stat. 1701; 30 U.S.C. 28-1-2). Such surveys must be conducted by qualified experts and verified by a detailed report filed in the county or recording district office in which the claim is located. This report must set forth fully the following:

(1) The location of the work performed in relation to the point of discovery and boundaries of the claim.

(2) Nature, extent and cost of the work performed.

(3) The basic findings of the surveys.

(4) The name, address and professional background of the person or persons conducting the work.

Such surveys may not be applied as labor for more than two consecutive years or for more than a total of five years on any one mining claim. Each survey shall be nonrepetitive of any previous survey of the same claim. Such surveys will not apply toward the statutory provision requiring the expenditure of $500 for each claim for mineral patent.

(b) As used in this section—

(1) The term "geological surveys" means surveys on the ground for mineral deposits by the proper application of the principles and techniques of the science of geology as they relate to the search for and discovery of mineral deposits;

(2) The term "geochemical surveys" means surveys on the ground for mineral deposits by the proper application of the principles and techniques of the science of chemistry as they relate to the search for and discovery of mineral deposits;

(3) The term "geophysical surveys" means surveys on the ground for mineral deposits through the employment of generally recognized equipment and methods for measuring physical difference between rock types or discontinuities in geological formations;

(4) The term "qualified expert" means an individual qualified by education or experience to conduct geological, geochemical, or geophysical surveys, as the case may be.

§ 3851.3 Effect of failure to perform assessment work.

(a) Failure of a mining claimant to comply substantially with the requirement of an annual expenditure of $100 in labor or improvements on a claim imposed by section 2324 of the Revised Statutes (30 U.S.C. 28) will render the claim subject to cancellation.

(b) Failure to make the expenditure or perform the labor required upon a location will subject a claim to relocation unless the original locator, his heirs, assigns, or legal representatives have resumed work after such failure and before relocation.

[37 FR 17836, Sept. 1, 1972]

§ 3851.4 Failure of a co-owner to contribute to annual assessment work.

Upon the failure of any one of several co-owners to contribute his proportion of the required expenditures, the co-owners, who have performed the labor or made the improvements as required, may, at the expiration of the year, give such delinquent co-owner personal notice in writing, or notice by publication in the newspaper published nearest the claim for at least once a week for 90 days; and if upon the expiration of 90 days after such notice in writing, or upon the expiration of 180 days after the first newspaper publication of notice, the delinquent co-owner shall have failed to contribute his proportion to meet such expenditures or improvements, his interest in the claim by law passes to his co-owners who have made the expenditures or improvements as aforesaid. Where a claimant alleges ownership of a forfeited interest under the foregoing provision, the statement of the publisher as to the facts of publication, giving dates, and a printed copy of the notice published, should be furnished, and the claimant must state that the delinquent co-owner failed to contribute his proper proportion within the period fixed by the statute.

[35 FR 9753, June 13, 1970. Redesignated at 37 FR 17836, Sept. 1, 1972]

§ 3851.5 Assessment work not required after patent certificate.

Annual expenditure is not required subsequent to entry, the date of issuing the patent certificate being the date contemplated by statute.

[35 FR 9753, June 13, 1970. Redesignated at 37 FR 17836, Sept. 1, 1972]

Subpart 3852—Deferment of Assessment Work

SOURCE: 35 FR 9753, June 13, 1970, unless otherwise noted.

§ 3852.0–3 Authority.

The Act of June 21, 1949 (63 Stat. 214; 30 U.S.C. 28b–c), provides for the temporary deferment in certain unavoidable contingencies of the performance of annual assessment work on mining claims held by location in the United States. The relief under this act is in addition to any other relief available under any other act of Congress with respect to the suspension of annual assessment work on mining claims.

§ 3852.1 Conditions under which deferment may be granted.

The deferment may be granted where any mining claim or group of claims in the United States is surrounded by lands over which a right-of-way for the performance of assessment work has been denied or is in litigation or is in the process of acquisition under State law or where other legal impediments exist which affect the right of the claimant to enter upon the surface of such claim or group of claims or to gain access to the boundaries thereof.

§ 3852.2 Filing of petition for deferment, contents.

(a) In order to obtain temporary deferment, the claimant must file with the authorized officer of the proper office, a petition in duplicate requesting such deferment. No particular form of petition is required, but the applicant must attach to one copy thereof a copy of the notice to the public required by the act which shows that it has been filed or recorded in the office in which the notices or certificates of location were filed or recorded. The petition and duplicate should be signed by at least one of the owners of each of the locations involved, shall give the names of the claims, dates of location, and the date of the beginning of the one-year period for which deferment is requested. Each petition shall be accompanied by a $10 nonrefundable service charge.

(b) If the petition is based upon the denial of a right-of-way, it must state the nature and ownership of the land or claim thereto over which it is necessary to obtain a right-of-way in order to reach the surrounded claims, and the land description thereof by legal subdivisions if the land is surveyed, and give full details as to why present use of the right-of-way is denied or prevented and as to the steps which have been taken to acquire the right to use it. The petition should state whether any other right-of-way is available and if so, give reasons why it is not feasible or desirable to use that right-of-way.

(c) If the petition is based on other legal impediments, they must be set out and their effect described in detail.

§ 3852.3 Notice of action on petition to be recorded.

The claimant must file or record, in the office in which he filed or recorded his notice of petition, a copy of the order or decision disposing of the petition.

§ 3852.4 Period for which deferment may be granted.

If the showing made is satisfactory, the authorized officer of the Bureau of Land Management will grant a deferment for an initial period not exceeding one year. The period shall begin on the date requested in the petition unless the approval sets a different date. Upon petition, the one year period may be renewed for another year if justifiable conditions exist. If the conditions justifying deferment are removed prior to the specified termination date of the deferment period, the deferment shall automatically be ended as of such earlier date.

§ 3852.5 When deferred assessment work is to be done.

All deferred assessment work may be begun at any time after the termination of the deferment but must be completed not later than the end of the assessment year commencing after the removal or cessation of the causes for the deferment or the expiration of any deferments granted under the act and shall be in addition to the annual assessment work required by law for such year.

(2) an environmental impact statement (EIS) is required prior to issuance of any patent to PCM; and (3) BLM should have investigated whether PCM is a citizen of the United States. 5/

In their challenge relating to discovery, appellants argue at considerable length that PCM's patent application failed to delineate, with sufficient particularity, the costs associated with mining and milling with special emphasis on environmental considerations. In order to place their argument in perspective, we shall briefly review both PCM's application and the mineral examination report prepared by the Forest Service, United States Department of Agriculture.

PCM's mineral patent application, as amended by two separate supplements, dated January 4 and March 18, 1980, alleged discoveries of substantial deposits of molybdenum at an average grade of fifteen-hundredths percent MoS_2. 6/ PCM stated that each claim contained either an outcrop or one or more drill holes. Open pit operations were envisaged, which would include drilling and blasting on benches, the loading of the broken rock on trucks for haulage to a primary crusher and, after crushing, the lean ore to stockpiles and the waste back to dumps. The milling process, described in the first supplement, would involve secondary and possible tertiary crushing

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5/ To the extent appellants are continuing to assert that they possess the requisite standing to initiate a private contest, we note that our prior decision In Re Pacific Coast Molybdenum, supra, decided this issue adversely to them.

6/ PCM provided no specific tonnage of enriched material insofar as the 32 claims at issue were concerned. It merely noted that the claims embraced a portion "of a large cohesive body of molybdenite mineralization, which is estimated to contain, from current drill results, a geologic reserve of 700 million tons" (patent application at 8).

such a proceeding, therefore, the claimant is the ultimate proponent of the rule, i.e., the validity of the claim. See Foster v. Seaton, supra.

This procedure, however, must be contrasted with the one before us in the instant case. Here, based both on the submissions of the patent applicant and the Government's own mineral examination, the appropriate officers of BLM, who are vested with the obligation to safeguard the public domain "to the end that valid claims may be recognized, invalid ones eliminated, and the rights of the public preserved" (Cameron v. United States, 252 U.S. 450, 460 (1920)), have determined that the mineral applicant has shown its entitlement to patent. Appellants have protested this decision. The State Office, having duly considered these protests, has rejected them. Decisions issued by state offices, pursuant to their delegated authority, are presumptively valid. It is appellants who are the proponent of the rule in this case, viz., that the decision appealed from is in error. The mineral claimant is not required in this case to affirmatively show his entitlement to patent. BLM has already determined that matter in favor of the claimant. Appellants must establish that this decision was wrong. 4/ ✓

Turning to the substance of the appeal, appellants have alleged, in essence, three separate grounds for appeal: (1) PCM has failed to show a discovery of a valuable mineral deposit existed prior to December 1, 1978;

4/ This is analogous to private contest proceedings. While, as we have noted above, the Government merely bears the burden of presenting a prima facie case upon which occurrence the ultimate burden of preponderation devolves upon the mineral claimant, where a private contest is initiated, the private contestant, not the claimant, has the ultimate burden of proof. See State of California v. Doria Mining & Engineering Corp., 17 IBLA 380, 389 (1974); Marvel Mining Co. v. Sinclair Oil & Gas Co., 75 I.D. 407, 423 (1968).

claim or an unpatented mining claim which was properly located, recorded, and maintained and which was, as of November 30, 1978, supported by a discovery of a valuable mineral deposit. The question before the Board is whether the 32 lode claims in issue were supported by a discovery as of November 30, 1978, and thereby constitute a "valid mining claim" under section 503(f) and attain the status of core claims under section 504(a).

[1] We also think it appropriate at the outset to clearly delineate the scope of our review and the concomitant burden placed on appellants. Normally, where the Government challenges the validity of a mining claim it bears the initial burden of presenting a prima facie case showing the claim's invalidity; the burden then devolves upon the claimant to overcome that showing by a preponderance of the evidence. See generally Foster v. Seaton, 271 F.2d 836 (D.C. Cir. 1959); United States v. Strauss, 59 I.D. 129 (1945). This approach results from recognition of the fact that when the Government contests the validity of a mining claim it has, under its plenary authority, determined to examine the status of a claim to land. In the context of a patent application, such a challenge is premised on the implicit finding by BLM that the evidence submitted with the patent application is insufficient to establish entitlement to a patent. United States Steel Corp., 52 IBLA 319 (1981). As a precondition to the issuance of patent, a mineral examination of the claim by Government mineral examiners is necessary. See Brattain Contractors, Inc., 37 IBLA 233 (1978). Where the totality of the evidence indicates that a discovery of a valuable mineral deposit within the meaning of the mining laws has not been made, BLM must issue a contest complaint. In

Fjords National Monument. 3/ Section 503(f)(1) withdrew the lands within the monument from the operation of the general mining laws. However, section 503(f)(2) provided:

> (A) After the date of enactment of this Act, any person who is the holder of any valid mining claim on public lands located within the boundaries of the Monuments, shall be permitted to carry out activities related to the exercise of rights under such claim in accordance with reasonable regulations promulgated by the Secretary to assure that such activities are compatible, to the maximum extent feasible, with the purposes for which the Monuments were established.
>
> (B) For purposes of determining the validity of a mining claim containing a sufficient quantity and quality of mineral as of November 30, 1978, to establish a valuable deposit within the meaning of the mining laws of the United States within the Monuments, the requirements of the mining laws of the United States shall be construed as if access and mill site rights associated with such claim allow the present use of the Monuments' land as such land could have been used on November 30, 1978.

✓

In addition, section 503(i)(1) provided for the leasing of lands for mining and milling purposes to holders "of valid mining claims."

Section 504, 94 Stat. 2403, provided a mechanism whereby any holder of an "unperfected mining claim" might obtain an exploration permit, and, upon a subsequent discovery of a valuable mineral deposit, a patent limited to the discovered mineral estate. An "unperfected mining claim" was differentiated from a "core claim." A "core claim" was defined as either a patented mining

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3/ While section 503(a) of ANILCA, 94 Stat. 2399, established the Misty Fjords National Monument containing approximately 2,285,000 acres, the Misty Fjords National Monument Wilderness, established by section 703(a)(5), 94 Stat. 2419, embraced 2,136,000 acres. The remaining 149,000 acres surrounding the Quartz Hill area were not placed in the Misty Fjords National Monument Wilderness.

as part of the Misty Fiords National Monument on December 1, 1978, by Presidential Proclamation No. 4623 (93 Stat. 1466), pursuant to section 2 of the Antiquities Act, Act of June 8, 1906, 34 Stat. 225, 16 U.S.C. § 431 (1976). In addition, on December 5, 1978, notice was published in the Federal Register of an application filed by the United States Department of Agriculture, AA-23139, seeking a withdrawal of various lands, including the lands embraced by PCM's claims, from location and entry under the general mining laws. See 43 FR 57134 (Dec. 5, 1978). Under the provisions of section 204(b)(1) of the Federal Land Policy and Management Act of 1976 (FLPMA), 90 Stat. 2751, 43 U.S.C. § 1714(b)(1) (1976), the publication of this notice also served to segregate the lands involved for a period of 2 years or until such time as the application was either approved or disapproved, whichever came first.

Subsequent to publication of notice of PCM's patent application, as required by 30 U.S.C. § 29 (1976), various organizations, including appellants, protested issuance of patent with respect to these claims. These protests were denied by the State Office in a number of separate decisions, dated August 3, 1981. Appellants timely pursued an appeal to this Board.

Before commencing an analysis of the issues raised by appellants, however, we wish to make two preliminary points. First, notice must be taken of the relevant provisions of the Alaska National Interest Lands Conservation Act (ANILCA), 94 Stat. 2371, Act of December 2, 1980 (codified variously in titles of the United States Code). Of particular relevance are the provisions found in sections 503 and 504 concerning the establishment of the Misty

State Office, Bureau of Land Management (BLM), dated August 3, 1981, denying their protests to an application for mineral patent filed by Pacific Coast Molybdenum Company (PCM). 1/ The application for patent involved a total of 32 lode claims (the JES 34-41, 55-62, 76-83, and 97-104, inclusive) located in unsurveyed secs. 34 and 35, T. 74 S., R. 98 E., and secs. 2 and 3, T. 75 S., R. 98 E., Copper River meridian, Alaska, within the exterior boundaries of the Tongass National Forest.

The claims in issue were located on October 24, 25, 28, and 30, 1974, by United States Borax and Chemical Corporation, and were subsequently conveyed by deed on November 26, 1975, to Pacific Coast Mines, Inc. On December 21, 1977, Pacific Coast Mines, Inc., quitclaimed the claims to PCM. 2/ Pacific Coast Mines, Inc., had filed an application for mineral survey in April 1976, and mineral survey No. 2267 was approved by the Chief, Division of Cadastral Survey, on January 19, 1978. In its application for patent, PCM alleged a discovery of molybdenum had been made within the 647.118 acres claimed.

While the lands embraced by PCM's claims were open to mineral entry when they were located, the lands were subsequently set apart and reserved

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1/ In a decision styled In Re Pacific Coast Molybdenum Co., 68 IBLA 325 (1982), this Board ruled that USAG and SEACC had standing to appeal from a denial of their protests. In that same decision, we held that the Sierra Club (Alaska Chapter) having failed to file a protest, was not a party to the case under 43 CFR 4.410 and thus lacked standing to appeal.

2/ We note that PCM (formerly Quartz Hill Mining Co.) is a wholly owned subsidiary of Quartz Hill Holding Co. which, in turn, is a wholly owned subsidiary of Pacific Coast Mines, Inc., which is wholly owned by Rio Holding Corp., which is wholly owned by RTZ Borax, Ltd., which is wholly owned by Rio Tinto-Zinc Corp., Ltd., a United Kingdom Corporation.

change, there is a reasonable likelihood of success that a paying mine can be developed.

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3. Mining Claims: Determination of Validity—Mining Claims: Discovery: Generally—Mining Claims: Patent

The quantum of evidence necessary to prove a discovery does not change because the land on which the claim is located may have other values. Bad faith in locating a claim, however, where proved, requires invalidation of a claim even where it is supported by a discovery.

4. Mining Claims: Generally--Patents of Public Lands: Generally

Where a corporation seeking a mineral patent files a certificate showing incorporation under the laws of a state, such corporation has established its citizenship within the meaning of the Mining Law of 1872, and a conclusive presumption thereby arises that all stockholders of the corporation are citizens of the United States, regardless of whether this is true or not.

APPEARANCES: Durwood J. Zaelke, Esq., Juneau, Alaska, for appellants; F. O. Eastaugh, Esq., Juneau, Alaska, Brian T. Donlan, Esq., and Charles L. Kaiser, Esq., Denver, Colorado, for appellee Pacific Coast Molybdenum Company; Dennis J. Hopewell, Esq., Office of the Regional Solicitor, Anchorage, Alaska, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE BURSKI

United Southeast Alaska Gillnetters (USAG) and the Southeast Alaska Conservation Council (SEACC) have appealed from a decision of the Alaska

March 3 1849

IN REPLY REFER TO:

United States Department of the Interior
OFFICE OF HEARINGS AND APPEALS
INTERIOR BOARD OF LAND APPEALS
4015 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22203

IN RE PACIFIC COAST MOLYBDENUM CO.

IBLA 81-1027 Decided August 5, 1983

Appeal from a decision of the Alaska State Office, Bureau of Land Management, dismissing protests to issuance of mineral patent for certain mining claims.

Affirmed.

1. Mining Claims: Determination of Validity--Mining Claims: Patent--Rules of Practice: Appeals: Burden of Proof--Rules of Practice: Protests

   Where protests to a mineral patent application are denied and an appeal is taken, protestants have the burden of affirmatively establishing that patent should not issue and that BLM's decision was in error.

2. Mining Claims: Discovery: Generally--Mining Claims: Discovery: Marketability

   The requirement that a mining claimant show that the mineral discovered on the claim is presently marketable at a profit simply means a mining claimant must show that, as a present fact, taking into consideration historic price and cost factors as well as the likelihood of their continuance or

✓

MARKETABILITY)

March 3, 1849

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

IN REPLY REFER TO:
3860 (680)

EVANS

To		Initial	Date
2	SD	[illegible]	
1	ASD	RH	
	ADMIN		
	RES		
4	OPER		
	PA		
3	Minerals		
	EEO		

Action by ______
Surname by ______
Return to ______

Taking into account historic price

October 4, 1983

Information Memorandum No. 84-2
Expires 9/30/84

To: All State Directors

From: Director

Subject: The Marketability Rule as Discussed in the Pacific Coast Molybdenum Company Decision (75 IBLA 16)

Your attention is directed to the enclosed IBLA decision titled "In Re Pacific Coast Molybdenum Co." (75 IBLA 16) decided August 5, 1983. Administrative Judge Burski has written an excellent rebuttal to a protest challenging of the validity of 32 lode mining claims based upon the "presently marketable at a profit" rule of the Department as affirmed by the Supreme Court in the Coleman case. The decision upholds the Government's findings that patent for these molybdenum claims should issue despite the fact that current prices are depressed. Headnote number two of the decision succinctly states the rationale to be considered when applying the so-called marketability rule to the question of discovery of a valuable mineral deposit. Please insure that those geologists/mining engineers, who are performing validity investigations or are conducting technical review of validity investigation reports, receive a copy of this decision to serve as an example of the Bureau's policy with regard to the profitability requirements.

Robert H. Lawton
Deputy Director, Energy and Mineral Resources
Acting

1 Enclosure:
Encl. 1 - IBLA In Re Pacific Coast Molybdedum Co. (24 pp)

United States Department of the Interior
OFFICE OF THE SOLICITOR
PACIFIC SOUTHWEST REGION
2800 COTTAGE WAY
ROOM E-2753
SACRAMENTO, CALIFORNIA 95825-1890

IN REPLY REFER TO:
BJStanley

March 19, 1982

Memorandum

To: State Director, BLM, CA
Attn: Jim Evans, Mining Engr., Folsom District

From: Regional Solicitor

Subject: Definition of Mineral and Mining Terms

I have reviewed the Definition of Mineral and Mining Terms per your request. The definitions appear accurate and complete.

Charles R. Renda
Regional Solicitor
Pacific Southwest Region

Burton J. Stanley
For the Regional Solicitor

Sulphur in Louisiana and New Mexico is also included as a leasable mineral. Mineral leasing and leasable minerals on onshore Federal lands is authorized and described by the Mineral Leasing Act of February 25, 1920 (41 Stat. 437; 30 USC Sect. 181, et seq.), as amended and supplemented.

All minerals on acquired Federal lands except salable minerals are leasable. See the Mineral Leasing Act for Acquired Lands of August 7, 1947 (61 Stat. 913; 30 USC Sect. 351-359). See also Section 402 of Reorganization Plan No. 3 of 1946 (60 Stat. 1099) which mandated that the function of leasing and disposal of minerals in certain acquired lands be transferred from the Secretary of Agriculture to the Secretary of the Interior.

All minerals in submerged lands on the Outer Continental Shelf (OCS) of the United States are leasable. Boundaries of the OCS are not everywhere precisely defined, however, the OCS is generally from 3 nautical miles offshore (9 nautical miles in the Gulf of Mexico) seaward to the 200 meter isobath. The Outer Continental Shelf Lands Act of August 7, 1953 (67 Stat. 462; 43 USC Sect. 1331-1343) specified that submerged lands seaward from the 3 nautical miles (or 9 nautical miles in the Gulf of Mexico) granted to the states by the Submerged Lands Act of May 22, 1953 (67 Stat.29; 43 USC Sect. 1303-1315) are placed under Federal ownership and jurisdiction. The outer seaward limit of the OCS for Federal ownership and for purposes of mineral leasing usually follows the definition given at the 1958 Geneva Convention on the Continental Shelf which was ratified in 1961 by the United States. In the Convention document language was given about the seaward limit of the OCS:

> ... to a depth of 200 meters or; beyond that limit, to where the depth of the superadjacent waters admit to the exploration of the natural resources of the said areas ....

Geothermal resources and associated byproducts on Federal lands are leasable. Leasing is authorized by the Geothermal Steam Act of 1970 (84 Stat. 1566; 30 USC 1001-1025). Geothermal resources and byproducts are defined in 43 CFR 3200.0-5:

> "Geothermal resources" means geothermal steam and associated geothermal resources which include: (1) All products of geothermal processes, embracing indigenous steam, hot water and hot brines; (2) steam and other gases, hot water and hot brines resulting from water, gas, or other fluids artificially introduced into geothermal formations, (3) heat or other associated energy found in geothermal formations; and (4) any byproducts derived from them.
>
> "Byproduct" means (1) any mineral or minerals (exclusive of oil, hydrocarbon gas, and helium) which are found in solution or in association with geothermal steam and which have a value of less than 75 per centum of the value of the geothermal steam or are not, because of quantity, quality, or technical difficulties in extraction and production, of sufficient value to warrant extraction and production by themselves, and (2) commercially demineralized water.

The Department of Interior defined "common varieties" in 43 CFR 3711.1(b) as:

> "Common varieties" includes deposits which, although they may have value for use in trade, manufacture, the sciences, or in the mechanical or ornamental arts, do not possess a distinct, special economic value for such use over and above the normal uses of the general run of such deposits. Mineral materials which occur commonly shall not be deemed to be "common varieties" if a particular deposit has distinct and special properties making it commercially valuable for use in manufacturing, industrial, or processing operation. In the determination of commercial value, such factors may be considered as quality and quantity of the deposit, geographical location, proximity to market or point of utilization, accessibility to transportation requirements for reasonable reserves consistent with usual industry practices to serve existing or proposed manufacturing, industrial, or processing facilities, and feasible methods for mining and removal of the material. Limestone suitable for use in the production of cement, metallurgical or chemical grade limestone, gypsum, and the like are not "common varieties."

The Materials Act of July 31, 1947 (61 Stat. 681) authorized the sale of materials including, but not limited to, sand, gravel, stone, and common clay on public lands. If the appraised value of material exceeds $1,000, it must be sold through competitive bidding. Governmental agencies, municipalities and non-profit organizations are authorized for free-use. Materials cannot be used for commercial purposes.

Section 3 of the Common Varieties Act of July 23, 1955 (30 USC Sect. 611; 69 Stat. 367) authorized removal of the common varieties of sand, gravel, cinders, pumice, pumicite, and clay from locatable minerals. The minerals were placed under the Materials Act of 1947 for administration. Therefore, after July 23, 1955 newly found "common variety" minerals on Federal lands could be removed only by sale - they were salable minerals. If a mining claim was located on a "common variety" mineral prior to July 23, 1955, the mining claimant must show that the material on the claim could have been mined at a profit as of July 23, 1955, or lose his discovery. Moreover, the profitability requirement is a continuing one and the claimant could be asked to demonstrate profitability at any time after July 23, 1955 until the claimant receives a claim patent.

In the Petrified Wood Act of September 26, 1962 (76 Stat. 652) petrified wood is defined and removed from the locatable mineral category and placed in the salable category. However, small amounts of petrified wood can be taken from public lands with a free-use permit issued by the BLM.

(3) Leasable minerals on onshore Federal lands are oil, gas, coal, phosphate, and chlorides, sulphates, carbonates, borates, silicates, and nitrates of potassium and sodium, native asphalt, solid and semi-solid bitumen and bitumimous rocks including oil-impregnated rocks from which oil is recovered by special processing.

MINERAL DEPOSITS AND MINERALS ON FEDERAL LANDS

Mineral deposits and minerals on Federal lands are in one of three groups; (1) LOCATABLE, (2) SALABLE, and (3) LEASABLE.

(1) Locatable minerals occur in valuable deposits on Federal lands open to mineral entry on which a valid discovery has been made. Valuable deposits of uncommon varieties of sand, gravel, stone, cinders, pumice, pumicite, and clay are in the locatable category, but salable and leasable minerals are not. It is difficult if not impossible to prepare a complete list of minerals that occur in locatable deposits, because of discovery and value requirements, and because some mineral deposits that are locatable on Federal lands are not locatable on the Outer Continental Shelf (OCS) nor on acquired Federal lands. Mining locations may be made in the States of Alaska, Arizona, Arkansas, California, Colorado, Florida, Idaho, Louisiana, Mississippi, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming (43 CFR 3811.2-1).

SUPPORTING DATA:

(30 USC Sec 22) ... all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to exploration and purchase....

(43 CFR 3812.1) Whatever is recognized as a mineral by the standard authorities, whether metallic or other substance, when found in public lands in quantity and quality sufficient to render the lands valuable on account thereof, is treated as coming within the purview of the mining laws.

(43 CFR 3811.1) Vacant public surveyed or unsurveyed lands are open to prospecting, and upon discovery of mineral, to location and purchase.

Castle V. Womble, 19 L.D. 455 (1894) - Discovery of locatable minerals deposits; the prudent-man test.

> "... where minerals have been found and the evidence is of such character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine ...."

U. S. v. Coleman, 390 U.S. 599(1968) - A valuable mineral deposit is one from which the mineral can be extracted, removed, and marketed at a profit.

(2) Salable minerals include, but are not limited to "common varieties"of sand, gravel, stone, cinders, pumice, pumicite, clay, and petrified wood.

Mining: Removal of minerals from their natural environment, and the moving of them to a milling, processing, or use site. Cal. Geol. 3/75, p. 60.

Prospect: An excavation or group of excavations in the earth, or beneath the sea, from which materials have been removed in the search of minerals. Cal. Geol. 3/75, p. 60.

Exploration or Prospecting: The search for a mineral deposit by geological, geophysical, and geochemical techniques, plus other techniques such as sampling, assaying, drilling, and any surface or underground works needed to determine the type and extent of mineral-bearing materials and the grade and amount of mineral reserves and or resources. Cal. Geol. 3/75, p. 60.

Development or Production Work: Work done on a mineral deposit after the mineral reserves have been determined. Cal. Geol. 3/75, p. 60.

MINED LANDS AND RECLAMATION

Mined Lands: Those lands on which mining has taken place. Cal. Geol. 3/75, p. 60.

Mining Waste: Rocks, soils, water, or airborne material, and any refuse resulting from any phase of mining which has little if any known value. Cal. Geol. 3/75, p. 60.

Overburden: Surface rocks or soils that overlie a mineral deposit. Cal. Geol. 3/75, p. 60.

Tailings: Incoherent material separated from a fluid medium either as mining waste, or because it is inferior in quality or value. Cal. Goel. 3/75, p. 60.

Reclamation: The return of mined lands to near the original condition or to some useful or potentially useful purpose. Cal. Geol. 3/75, p. 60.

MINERAL PROCESSING

Milling: Treatment of minerals, including crushing, grinding, sizing, classification, flotation, and amalgamation - also mineral concentration through flotation, gravity, magnetic, and any other means. Cal. Goel. 3/75, p. 60.

Smelting: Any metallurgical operation in which metal is separated by fusion from those impurities with which it occurs. Cal. Geol. 3/75, p. 60.

Chemical Treatment: The treatment of minerals by chemicals in solutions as: leaching, cyanidation, carbon reduction, and other means. Cal. Geol. 3/75, p. 60.

C. Discounted Cash Flow Analysis (DCF)

This technique can be used either to evaluate the economic attractiveness of a mineral investment or to estimate the fair market value of a mineral property. Potential cash flows are discounted at a given rate to the time of the evaluation. The present values of the annual cash flows, usually for a period of no more than 20 years, along with salvage values, are added to obtain the value of a given mineral property.

Discount Rate: An annual percentage rate of return on invested capitol, generally low for low risk investments, and high for high risk investments. The reasonableness of a rate may be tested by comparison with rates in the present market-place.

Cash Flow: The actual or prospecture revenue from a mineral property, less operating and capitol costs and taxes. During the exploration and development stages of mineral property cash flows will be negative. After operations begin and revenue is received, cash flows should be positive and investors should start earning a return on their investment.

Present Value or Present Worth: The sum of the present values of all future years' cash flows over the economic life of mineral property, (usually no more than 20 years) after being discounted at a specified discount rate. The present value takes into account the earning power of money over time. It is an indicator of the worth of a mineral property for its projected life. A positive value means that invested money will earn a higher rate of return than that indicated by the discount rate. If the value is zero the invested money will earn what the discount rate indicates. If the value is negative then invested money will earn less than that indicated by the discount rate.

Internal Rate Of Return: That discount rate that will fix the present worth at zero. If the internal rate of return is less than the discount rate used, then the mineral property should be a poor investment. Conversely, if the rate is greater than the discount rate used the investment should be a good one.

Mineral Depletion Allowance: A percentage deduction used in computing taxable income for the exhaustion of an asset in the form of a mineral deposit. The percentage rate varies for different mineral commodities.

MINES AND MINING

Mine: An excavation or group of excavations in the earth, or beneath the sea, from which minerals have been removed and sold or used. Also, an area or site from which mineral-bearing brines are removed and sold or used, and an area or site, on or near the ocean and other bodies of water from which minerals have been sold or used. Cal. Geol. 3/75, p. 60.

Discovery and Validity (Requirement for Patent of Mining Claims) For Locatable Minerals:

A valid claim is one where the claimant has filed in good faith based on a discovery of a valuable mineral deposit. A discovery is: "Where minerals have been found and the evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means with a reasonable prospect of success, in developing a valuable mine,". . . Castle vs. Womble 19 L.D. 455, 457 (1894). Geologic inference (see Mineral in Character) will not support a discovery. A valuable mineral deposit must be actually and physically exposed within each mining claim. East Tintic Consolidated Mining Claim 40 L.D. 271 (1911); U.S. v. Miller 59 I.D. 446 (1947); United States v. Hines Gilbert Gold Mines Company, 1 IBLA 296 (Feb. 25, 1971); United States v. Richard P. Walls, 30 IBLA 333 (June 7, 1977).

A determination that a valuable mineral deposit exists is critical for as stated in 30 USC Sec. 22 . . . "all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to exploration and purchase". . . It is apparent from legal decisions that a valuable mineral deposit is one from which the mineral can be extracted, removed, and marketed at a profit. U.S. V. Coleman, Supreme Court No. 630 (April 22, 1968).

This "marketability rule" has been determined to mean just that - present marketability not the present marketing of materials from the claim. However, speculative future marketability cannot be relied on, only economic circumstances which are rationally predictable from present known facts. United States v. James J. Heldman et al., 14 IBLA (Nov. 27, 1973); United States v. Ethel Schell Larson and Minerals Trust Corporation, 9 IBLA 247 (Feb. 2, 1973); United States v. Menzel G. Johnson, 16 IBLA 234 (July 10, 1974); Ideal Basic Industries Inc. v. Morton C. A. Alaska 1976, 542 F. 2d 1364.

Mineral Potential: The potential of an area for development of a valuable deposit (leasable) or a valuable mineral deposit (locatable and salable). It can be expressed in any reasonable terms, for each mineral commodity, but often the qualifiers low, medium, high, or no known mineral potential will be adequate.

MINERAL APPRAISAL

Fair Market Value: The amount in cash, or on terms reasonably equivalent to cash (at the time of evaluation), for which in all probability the property would be sold by a knowledgeable owner willing but not obligated to sell to a knowledgeable purchaser who desired but is not obligated to buy.

A. Prior Sales of mineral property in question

A reasonably recent arm's-length sale of a mineral property, if the character of the property has not materially changed since the sale, provides the best evidence of market value.

B. Sales of comparable mineral properties

Sales of mineral properties, reasonably recent, that are comparable economically to the subject appraisal property are the next best evidence of fair market value.

ECONOMIC MINERAL TERMS

Economic (Minerals): Means that profitable extraction or production under defined investment assumptions has been established, analytically demonstrated, or assumed with reasonable certainty. Geol. Survey Cir. 832, p. 2.

Valuable (Mineral) Deposit (Of Leasable Minerals): In reference to the leasable minerals phosphate, sodium, sulfur, and potassium - "the mineral deposit discovered under the permit (prospecting permit) is of such a character and quantity that a prudent person would be justified in the further expenditure of his labor and means with a reasonable prospect of success in developing a valuable mine. The permittee must present sufficient evidence to show that there is a reasonable expectation that his revenues from the sale of the mineral will exceed his costs of developing the mine, and extracting, removing, and marketing the mineral." 43 CFR 3520.1-1(c).

Prospectively Valuable (Mineral Lands) and Nominal Value: A term used by the Conservation Division of the Geological Survey (now Minerals Management Service -MMS- since 1-19-82) for classification of lands where geologic conditions offer some possibility for the occurrence of minerals, but their presence has not been established. In the classification of lands as prospectively valuable it is recognized that the degree of value may vary from near zero to near certainty. If the dollar value of minerals is near the zero end of the value scale it can appropriately be termed nominal: Geol. Survey Memo 5/24/67 to the Assist. Sec., Dept. of Int., signed by W. T. Pecora.

Mineral In Character, Mineral Lands, or Lands Known To Be Valuable For: These three terms "have been used in the statutes, regulations and decisions relating to the public lands without a perceptible difference in meaning in describing the lands which are excluded from operation of many of the nonmineral public lands laws because of known or supposed mineral values." State of California v. Rodeffer, A30611 75 I.D. 179-180 (June 28, 1968).

If the land in question, at the time of determination, has known conditions that reasonably engender the belief that the land contains minerals of such quality and quantity as to render their extraction profitable and to justify expenditures to that end it is mineral in character. Diamond Coal and Coke Co. v. United States, 233 U.S. 236, 240 (1914): United States v. McCall, supra at 27, 79 I.D. at 460; United States v. Bunkowski, supra at 127, 79 I.D. at 55.

The mineral character of Federal lands may be established by any satisfactory evidence, including geological inference (U.S. v. Carbon County Land Co., 46 F. 2d 980 (1931), affirmed, 284 U.S. 534 (1932)). In the case of Kern Oil Company v. Clotfelter, 30 L.D. 583, 587 (1901), it was ruled that:

> "The evidence bearing upon the character of the lands selected should not be restricted to mineral discoveries or development upon these lands and their geological formation but may extend to the discovery and development of mineral on adjacent lands, and to their geological formation."

However, inferred existence of a mineral deposit does not establish the land as mineral in character without evidence that extraction of the mineral deposit would be profitable.

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ATTACHMENT B

DEFINITION OF MINERAL AND MINING TERMS

MINERALS AND MINERAL DEPOSITS

Mineral (for purposes of economic geology): A naturally occurring inorganic solid, liquid (excluding water), or gas in such concentration that their economic extraction is currently or potentially feasible (Specially included as minerals are oil, gas, asphalt, tar sands, oil shale, and geothermal resources & assoc byproducts).

Synthetic Mineral: A manufactured material that has the physical and/or chemical characteristics of a mineral.

Mineral Deposit: One or more minerals that occur in such a manner and amount as to make their extraction and processing reasonably possible. Cal. Geol. 3/75, p. 60.

Mineral Occurrence: An occurrence of one or more minerals. Cal. Geol. 3/75, p. 60.

Mineral Commodity: Any mineral that has been or may be extracted for beneficial use. Cal. Geol. 3/75, p. 60.

Mineral Reserves: Measurable amounts of mineral-bearing materials that can be mined at a profit under existing conditions of technology, economics, and politics.

Mineral Resource: Mineral-bearing materials that could become mineral reserves either through changes in technology or in economic or political conditions.

Types of mineral reserves and resources are:

A. Measured - Quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; grade and/or quality are computed from the results of detailed sampling. The sites for inspection, sampling, and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth, and mineral content of the reserve or resource are well established. Geol. Survey Cir. 831, p. 2.

B. Indicated - Quantity and grade and/or quality are computed from information similar to that used for measured reserves or resources, but the sites for inspection, sampling and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for measured reserves or resources, is high enough to assume continuity between points of observation. Geol. Survey Cir. 831, p. 2.

C. Inferred - Estimates are based on an assumed continuity beyond measured and/or indicated reserves or resources, for which there is geologic evidence. Inferred reserves or resources may or may not be supported by samples or measurements. Geol. Survey Cir. 831, p. 2.

D. Demonstrated - Term for the sum of measured plus indicated reserves or resources. Geol. Survey Cir. 831.

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HANDBOOK FOR MINERAL EXAMINERS

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January 1984

Appendix 4

March 3, 1849

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

IN REPLY REFER TO:
3800 (570)

February 8, 1983

Instruction Memorandum No. 83-311
Expires 9/30/84

To: AFO's

From: Director

Subject: Mining Claim Validity Examinations and Contests

The purpose of this instruction memorandum is to reiterate and reaffirm the Bureau's long standing policy as to when validity examinations and contest actions, as appropriate, will be initiated against mining claims. The approach is designed to limit the effort only to situations which dictate and demand such actions.

Listed below in priority order, are the only situations in which validity examinations will be made. The purpose is to determine whether the mining claims involved are valid, and where such validity is lacking to initiate contest actions.

1. Where a mineral patent application has been filed and a field examination is required to verify the validity of the claims.
2. Where there is a conflict with a disposal application, and it is deemed in the public interest to do so (see Instruction Memorandum 82-359 dated April 2, 1982), or where the statute authorizing the disposal required clearance of any encumbrance.
3. Where the land is needed for a Federal program.
4. Where a mining claim is located under the guise of the mining law and flagrant unauthorized use of the land or mineral resource is occurring.

Following this policy will assure that scarce Federal funds will be expended on validity examinations only where there is a definite purpose as identified above.

James M Parker
Associate Director

Appendix 3

detail the extent and value of the improvements, such as house, barn, vineyard, orchard, fencing, etc., and mining improvements.

(c) The testimony should be as full and complete as possible; and in addition to the leading points indicated above, where an attempt is made to prove the mineral character of lands which have been entered under the agricultural laws, it should show at what date, if at all, valuable deposits of minerals were first known to exist on the lands.

Subpart 3873—Segregation

SOURCE: 35 FR 9760, June 13, 1970, unless otherwise noted.

§ 3873.1 Segregation of mineral from non-mineral land.

Where a survey is necessary to set apart mineral from non-mineral land the appropriate authorized officer will have special instructions prepared outlining the procedure to be followed in the required survey. The survey will be executed at the expense of the United States. Where, in stock-raising homestead entries, it has been satisfactorily established that there are existent prior unpatented mining claims, the segregation of the latter is not strictly a segregation of mineral from non-mineral land, but rather the procedure adopted to define the boundaries of and provide a legal description for that part of the homestead entry which is not within the segregated mining claims.

§ 3873.2 Effect of decision that land is mineral.

The fact that a certain tract of land is decided upon testimony to the mineral in character is by no means equivalent to an award of the land to a miner. In order to secure a patent for such land, he must proceed as in other cases, in accordance with this part.

§ 3873.3 Non-mineral entry of residue of subdivisions invaded by mining claims.

(a) The authorized officer will accept and approve any application (if otherwise regular), to make a non-mineral entry of the residue of any original lot or legal subdivision which is invaded by mining claims if the tract has already been lotted to exclude such claims. If not so lotted, and if the original lot or legal subdivision is invaded by patented mining claims, or by mining claims covered by pending applications for patent which the non-mineral applicant does not desire to contest, or by approved mining claims of established mineral character, the authorized officer will accept and approve the application (if otherwise regular), exclusive of the conflict with the mining claims.

(b) The authorized officer will allow no non-mineral application for any portion of an original lot or 40-acre legal subdivision, where the tract has not been lotted to show the reduced area by reason of approved surveys of mining claims for which applications for patent have not been filed, until the non-mineral applicant submits a satisfactory showing that such surveyed claims are in fact mineral in character. Applications to have lands which are asserted to be mineral, or mining locations, segregated by survey with a view to the non-mineral appropriation of the remainder, will be made to the authorized officer of the proper office. Such applications must be supported by a written statement of the party in interest, duly corroborated by two or more disinterested persons, or by such other or further evidence as may be required, that the land sought to be segregated as mineral is in fact mineral in character.

PARTS 3874–3999 [RESERVED]

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the effective date of the act, the time in which to file adverse suits is governed by the Act of June 7, 1910. Where a mineral patent application was filed prior to September 21, 1961, the entry will not be allowed until after the expiration of eight months following the publication period.

§ 3871.4 Patent proceedings stayed when adverse claim is filed; exception.

When an adverse claim is filed as aforesaid, the authorized officer will endorse upon the same the precise date of filing and preserve a record of the date of notifications issued thereon; and thereafter all proceedings on the application for patent will be stayed with the exception of the completion of the publication and posting of notices and plat and the filing of the necessary proof thereof, until the controversy shall have been finally adjudicated in court or the adverse claim waiver or withdrawn.

§ 3871.5 Termination of adverse suit.

(a) Where an adverse claim has been filed and suit thereon commenced within the statutory period and final judgment rendered determining the right of possession, it will not be sufficient to file with the authorized officer a certificate of the clerk of the court setting forth the facts as to such judgment, but the successful party must, before he is allowed to make entry, file a certified copy of the judgment roll, together with the other evidence required by R.S. 2326 (30 U.S.C. 30), and a certificate of the clerk of the court under the seal of the court showing, in accord with the record facts of the case, that the judgment mentioned and described in the judgment roll aforesaid is a final judgment; that the time for appeal therefrom has, under the law, expired, and that no such appeal has been filed, or that the defeated party has waived his right to appeal. Other evidence showing such waiver or an abandonment of the litigation may be filed.

(b) Where such suit has been dismissed, a certificate of the clerk of the court to that effect or a certified copy of the order of dismissal will be sufficient.

(c) After an adverse claim has been filed and suit commenced, a relinquishment or other evidence of abandonment of the adverse claim will not be accepted, but the case must be terminated and proof thereof furnished as required by the last two paragraphs.

§ 3871.6 Certificate required when no suit commenced.

Where an adverse claim has been filed but no suit commenced against the applicant for patent within the statutory period, a certificate to that effect by the clerk of the State court having jurisdiction in the case, and also by the clerk of the district court of the United States for the district in which the claim is situated, will be required.

Subpart 3872—Protests, Contests and Conflicts

SOURCE: 35 FR 9760, June 13, 1970, unless otherwise noted.

§ 3872.1 Protest against mineral applications.

(a) At any time prior to the issuance of patent, protest may be filed against the patenting of the claim as applied for, upon any ground tending to show that the applicant has failed to comply with the law in any matter essential to a valid entry under the patent proceedings. Such protest cannot, however, be made the means of preserving a surface conflict lost by failure to adverse or lost by the judgment of the court in an adverse suit. One holding a present joint interest in a mineral location included in an application for patent who is excluded from the application, so that his interest would not be protected by the issue of patent thereon, may protest against the issuance of a patent as applied for, setting forth in such protest the nature and extent of his interest in such location, and such a protestant will be deemed a party in interest entitled to appeal. This results from the holding that a co-owner excluded from an application for patent does not have an "adverse" claim within the meaning of R.S. 2325 and 2326 (30 U.S.C. 29, 30). (See Turner v. Sawyer, 150 U.S. 578-586, 37 L. ed. 1189-1191.)

(b) Such protest filed by any party, other than a Federal agency, must be accompanied by a $10 nonrefundable service charge.

§ 3872.2 Procedure in contest cases.

Parts 1840 and 1850 of this chapter, in cases before the United States, the Bureau of Land Management, and the Department of the Interior will, so far as applicable, govern in all cases and proceedings arising in contests and hearings to determine the character of lands.

§ 3872.3 Presumption as to land returned as mineral.

Public land returned upon the survey records as mineral shall be withheld from entry as agricultural land until the presumption arising from such a return shall be overcome.

§ 3872.4 Procedure to dispute record character of land.

(a) When lands returned as mineral are sought to be entered as agricultural under laws which require the submission of final proof after due notice by publication and posting, the filing of the proper nonmineral statement in the absence of allegations that the land is mineral will be deemed sufficient as a preliminary requirement. A satisfactory showing as to character of land must be made when final proof is submitted.

(b) In case of application to enter, locate, or select such lands as agricultural, under laws in which the submission of final proof after due publication and posting is not required, notice thereof must first be given by publication for 60 days and posting in the local office during the same period, and affirmative proof as to the character of the land submitted. In the absence of allegations that the land is mineral, and upon compliance with this requirement, the entry location, or selection will be allowed, if otherwise regular.

(c) Where as against the claimed right to enter such lands as agricultural it is alleged that the same are mineral, or are applied for as mineral lands, the proceedings in this class of cases will be in the nature of a contest, and the practice will be governed by the rules in force in contest cases.

§ 3872.5 Testimony at hearings to determine character of lands.

(a) At hearings to determine the character of lands the claimants and witnesses will be thoroughly examined with regard to the character of the land; whether the same has been thoroughly prospected; whether or not there exists within the tract or tracts claimed any lode or vein of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposit which has ever been claimed, located, recorded, or worked; whether such work is entirely abandoned, or whether occasionally resumed; if such lode does exist, by whom claimed, under what designation, and in which subdivision of the land it lies; whether any placer mine or mines exist upon the land; if so, what is the character thereof, whether of the shallow-surface description, or of the deep cement, blue lead, or gravel deposits; to what extent mining is carried on when water can be obtained, and what the facilities are for obtaining water for mining purposes; upon what particular 10-acre subdivisions mining has been done, and at what time the land was abandoned for mining purposes, if abandoned at all. In every case, where practicable, an adequate quantity or number of representative samples of the alleged mineral-bearing matter or material should be offered in evidence, with proper identification, to be considered in connection with the record, with which they will be transmitted upon each appeal that may be taken. Testimony may be submitted as to the geological formation and development of mineral on adjoining or adjacent lands and their relevancy.

(b) The testimony should also show the agricultural capacities of the land, what kind of crops are raised thereon, the value thereof; the number of acres actually cultivated for crops of cereals or vegetables, and within which particular 10-acre subdivision such crops are raised; also which of these subdivisions embrace the improvements, giving in

§ 3864.1 Millsite patents; general.

§ 3864.1-1 Application for patent.

(a) Land entered as a millsite must be shown to be nonmineral. Millsites are simply auxiliary to the working of mineral claims. R.S. 2337 (30 U.S.C. 42) provides for the patenting of millsites.

(b) To avail themselves of this provision of law, parties holding the possessory right to a vein or lode claim, and to a piece of nonmineral land not contiguous thereto for mining or milling purposes, not exceeding the quantity allowed for such purpose by R.S. 2337, or prior laws, under which the land was appropriated, the proprietors of such vein or lode may file in the proper office their application for a patent, which application, together with the plat and field notes, may include, embrace, and describe, in addition to the vein or lode claim, such noncontiguous millsite, and after due proceedings as to notice, etc., a patent will be issued conveying the same as one claim. The owner of a patented lode may, by an independent application, secure a millsite, if good faith is manifest in its use or occupation in connection with the lode and no adverse claim exists.

(c) The Act of March 18, 1960 (74 Stat. 7; 43 U.S.C. 42(b)), amends R.S. 2337 to allow the holders of possessory right in a placer claim to hold nonmineral land for mining, milling, processing beneficiation, or other operations in connection with the placer claim. Applications for patent for such millsites are subject to the same requirements as to survey and notice as one applicable to placer mining claims. No one millsite may exceed five acres and payment will be $2.50 per acre or fraction thereof.

§ 3864.1-2 Millsites applied for in conjunction with a lode claim.

Where the original survey includes a lode claim and also a millsite the lode claim should be described in the plat and field notes as "Sur. No. 37, A," and the millsite as "Sur. No. 37, B," or whatever may be its appropriate numerical designation; the course and distance from a corner of the millsite to a corner of the lode claim to be invariably given in such plat and field notes, and a copy of the plat and notice of application for patent must be conspicuously posted upon the millsite as well as upon the vein or lode claim for the statutory period of 60 days. In making the entry no separate receipt or certificate need be issued for the millsite, but the whole area of both lode and millsite will be embraced in one entry, the price being $5 for each acre and fractional part of an acre embraced by such lode and millsite claim.

§ 3864.1-3 Millsites for quartz mills or reduction works.

In case the owner of a quartz mill or reduction works is not the owner or claimant of a vein or lode claim the law permits him to make application therefor in the same manner prescribed for mining claims, and after due notice and proceedings, in the absence of a valid adverse filing, to enter and receive a patent for his millsite at the price named in the preceding section.

§ 3864.1-4 Proof of nonmineral character.

In every case there must be satisfactory proof that the land claimed as a millsite is not mineral in character, which proof may, where the matter is unquestioned, consist of the statement of two or more persons capable, from acquaintance with the land to testify understandingly.

PART 3870—ADVERSE CLAIMS, PROTESTS AND CONFLICTS

Subpart 3871—Adverse Claims

Sec:
3871.1 Filing of claim.
3871.2 Statement of claim.
3871.3 Action by authorized officer.
3871.4 Patent proceedings stayed when adverse claim is filed; exception.
3871.5 Termination of adverse suit.
3871.6 Certificate required when no suit commenced.

Subpart 3872—Protests, Contests and Conflicts

3872.1 Protest against mineral applications.
3872.2 Procedure in contest cases.

Sec.
3872.3 Presumption as to land returned as mineral.
3872.4 Procedure to dispute record character of land.
3872.5 Testimony at hearings to determine character of lands.

Subpart 3873—Segregation

3873.1 Segregation of mineral from nonmineral land.
3873.2 Effect of decision that land is mineral.
3873.3 Non-mineral entry of residue of subdivisions invaded by mining claims.

Subpart 3871—Adverse Claims

SOURCE: 35 FR 9759, June 13, 1970, unless otherwise noted.

§ 3871.1 Filing of claim.

(a) An adverse claim must be filed with the authorized officer of the proper office where the application for patent is filed or with the manager of the district in which the land is situated at the time of filing the adverse claim. The claim may be filed by the adverse claimant, or by his duly authorized agent or attorney in fact cognizant of the facts stated.

(b) Where an agent or attorney in fact files the adverse claim he must furnish proof that he is such agent or attorney.

(c) The agent or attorney in fact must sign the statement of the adverse claim within the land district where the claim is situated, stating that it was so signed.

(d) A fee of $10 is payable by an adverse claimant at the time of filing his adverse claim. This charge is not refundable.

§ 3871.2 Statement of claim.

(a) The adverse claim must fully set forth the nature and extent of the interference or conflict; whether the adverse party claims as a purchaser for valuable consideration or as a locator. If the former, a certified copy of the original location, the original conveyance, a duly certified copy thereof, or an abstract of title from the office of the proper recorder should be furnished, or if the transaction was a merely verbal one he will narrate the circumstances attending the purchase, the date thereof, and the amount paid, which facts should be supported by the statement of one or more witnesses, if any were present at the time, and if he claims as a locator he must file a duly certified copy of the location from the office of the proper recorder.

(b) In order that the "boundaries" and "extent" of the claim may be shown, it will be incumbent upon the adverse claimant to file a plat showing his entire claim, its relative situation or position with the one against which he claims, and the extent of the conflict: *Provided, however*, That if the application for patent describes the claim by legal subdivisions, the adverse claimant, if also claiming by legal subdivisions, may describe his adverse claim in the same manner without further survey or plat. If the claim is not described by legal subdivisions it will generally be more satisfactory if the plat thereof is made from an actual survey by a mineral surveyor and its correctness officially certified thereon by him.

§ 3871.3 Action by authorized officer.

(a) Upon the adverse claim being filed within the 60-day period of publication, the authorized officer will immediately give notice in writing to the parties that such adverse claim has been filed, informing them that the party who filed the adverse claim will be required within 30 days from the date of such filing to commence proceedings in a court of competent jurisdiction to determine the question of right of possession, and to prosecute the same with reasonable diligence to final judgment, and that should such adverse claimant fail to do so, his adverse claim will be considered waived and the application for patent be allowed to proceed upon its merits.

(b) The Act of September 21, 1961 (Pub. L. 87-260; 75 Stat. 541), amends the Act of June 7, 1910 (36 Stat. 459; 48 U.S.C. 386), and provides that adverse suits against mineral entries in Alaska shall be instituted within the 60-day time limit set forth in R.S. 2325 and 2326, (30 U.S.C. 29, 30). The act further provides that where a mineral patent application was filed prior to in all cases in the name of the applicant for patent, the title conveyed by the patent, of course, in each instance inuring to the transferee of such applicant where a transfer has been made pending the application for patent.

§ 3862.6 Diligent prosecution.

§ 3862.6-1 Failure to prosecute application with diligence.

The failure of an applicant for patent to a mining claim to prosecute his application to completion, by filing the necessary proofs and making payment for the land, within a reasonable time after the expiration of the period of publication of notice of the application, or after the termination of adverse proceedings in the courts, constitutes a waiver by the applicant of all rights obtained by the earlier proceedings upon the application.

§ 3862.7 Application processing upon contest or protest.

§ 3862.7-1 Resumption of patent proceedings after suspension due to adverse claim or protest.

The proceedings necessary to the completion of an application for patent to a mining claim, against which an adverse claim or protest has been filed, if taken by the applicant at the first opportunity afforded therefor under the law and departmental practice, will be as effective as if taken at the date when, but for the adverse claim or protest, the proceedings on the application could have been completed.

§ 3862.8 Patents for mining claims.

§ 3862.8-1 Land descriptions in patents.

The land description in a patent for a lode mining claim, for a millsite, or for a placer claim not consisting of legal subdivisions, shall hereafter consist of the names and survey numbers of the claims being patented and those being excluded, or of the names of the excluded claims if they are unsurveyed, or of the legal subdivisions of excluded land covered by homestead or other nonmineral entry. The land description shall refer to the field notes of survey and the plat thereof for a more particular description and the patent shall expressly make them a part thereof. Where shown by the mineral entry the patent shall give the actual or approximate legal subdivision, section, township and range, the name of the county and of the mining district, if any, wherein the claims are situated. A copy of the plat and field notes of each mineral survey patented will be furnished to the patentee.

Subpart 3863—Placer Mining Claim Patent Applications

SOURCE: 35 FR 9758, June 13, 1970, unless otherwise noted.

§ 3863.1 Placer mining claim patent applications; general.

(a) The proceedings to obtain patents for placer claims, including all forms of mineral deposits excepting veins of quartz or other rock in place, are similar to the proceedings prescribed for obtaining patents for vein or lode claims; but where a placer claim shall be upon surveyed lands, and conforms to legal subdivisions, no further survey or plat will be required. Where placer claims cannot be conformed to legal subdivisions, survey and plat shall be made as on unsurveyed lands.

(b) The price of placer claims is fixed at $2.50 per acre or fractional part of an acre.

§ 3863.1-1 Application for patent.

§ 3863.1-2 Proof of improvements for patent.

The proof of improvements must show their value to be not less than $500 and that they were made by the applicant for patent or his grantors. This proof should consist of the statement of two or more disinterested witnesses.

§ 3863.1-3 Data to be filed in support of application.

(a) In placer applications, in addition to the recitals necessary in and to both vein or lode and placer applications, the placer application should contain, in detail, such data as will support the claim that the land applied for is placer ground containing valuable mineral deposits not in vein or lode formation and that title is sought not to control water courses or to obtain valuable timber but in good faith because of the mineral therein. This statement, of course, must depend upon the character of the deposit and the natural features of the ground, but the following details should be covered as fully as possible: If the claim be for a deposit of placer gold, there must be stated the yield per pan, or cubic yard, as shown by prospecting and development work, distance to bedrock, formation and extent of the deposit, and all other facts upon which he bases his allegation that the claim is valuable for its deposits of placer gold. If it be a building stone or other deposit than gold claimed under the placer laws, he must describe fully the kind, nature, and extent of the deposit, stating the reasons why same is by him regarded as a valuable mineral claim. He will also be required to describe fully the natural features of the claim; streams, if any, must be fully described as to their course, amount of water carried, fall within the claim; and he must state kind and amount of timber and other vegetation thereon and adaptability to mining or other uses.

(b) If the claim be all placer ground, that fact must be stated in the application and corroborated by accompanying proofs; if of mixed placers and lodes, it should be so set out, with a description of all known lodes situated within the boundaries of the claim. A specific declaration, such as is required by R.S. 2333 (30 U.S.C. 37) must be furnished as to each lode intended to be claimed. All other known lodes are, by the silence of the applicant, excluded by law from all claim by him, of whatsoever nature, possessory or otherwise.

(c) While these data are required as a part of the mineral surveyor's report in case of placers taken by special survey, it is proper that the application for patent incorporate these facts.

(d) Inasmuch as in case of claims taken by legal subdivisions, no report by a mineral surveyor is required, the claimant, in his application in addition to the data above required, should describe in detail the shafts, cuts, tunnels, or other workings claimed as improvements, giving their dimensions, value, and the course and distance thereof to the nearest corner of the public surveys.

(e) The statement as to the description and value of the improvements must be corroborated by the statements of two disinterested witnesses. The proof showing must be made in duplicate. See 51 L.D. 265 and 52 L.D. 190.

(f) Applications awaiting entry, whether published or not, must be made to conform to this part, with respect to proof as to the character of the land Entries already made will be suspended for such additional proofs as may be deemed necessary in each case.

§ 3863.1-4 Applications for placers containing known lodes.

Applicants for patent to a placer claim, who are also in possession of a known vein or lode included therein, must state in their application that the placer includes such vein or lode. The published and posted notices must also include such statement. If veins or lodes lying within placer locations are owned by other parties, the fact should be distinctly stated in the application for patent and in all the notices. But in all cases whether the lode is claimed or excluded, it must be surveyed and marked upon the plat, the field notes and plat giving the area of the lode claim or claims and the area of the placer separately. An application which omits to claim such known vein or lode must be construed as a conclusive declaration that the applicant has no right of possession to the vein or lode. Where there is no known lode or vein, the fact must appear by the statement of two or more witnessess.

Subpart 3864—Millsite Patents

SOURCE: 35 FR 9758, June 13, 1970, unless otherwise noted.

§ 3862.3 Possessory rights.

§ 3862.3-1 Right by occupancy.

(a) The provisions of R.S. 2332 (30 U.S.C. 38), greatly lessen the burden of proof, more especially in the case of old claims located many years since, the records of which, in many cases, have been destroyed by fire, or lost in other ways during the lapse of time, but concerning the possessory right to which all controversy or litigation has long been settled.

(b) When an applicant desires to make his proof of possessory right in accordance with this provision of law, he will not be required to produce evidence of location, copies of conveyances, or abstracts of title, as in other cases, but will be required to furnish a duly certified copy of the statute of limitation of mining claims for the State, together with his statement giving a clear and succinct narration of the facts as to the origin of his title, and likewise as to the continuation of his possession of the mining ground covered by his application; the area thereof; the nature and extent of the mining that has been done thereon; whether there has been any opposition to his possession, or litigation with regard to his claim, and if so, when the same ceased; whether such cessation was caused by compromise or by judicial decree, and any additional facts within the claimant's knowledge having a direct bearing upon his possession and bona fides which he may desire to submit in support of his claim.

§ 3862.3-2 Certificate of court required.

There should likewise be filed a certificate, under seal of the court having jurisdiction of mining cases within the judicial district embracing the claim, that no suit or action of any character whatever involving the right of possession to any portion of the claim applied for is pending, and that there has been no litigation before said court affecting the title to said claim or any part thereof for a period equal to the time fixed by the statute of limitations for mining claims in the State as aforesaid other than that which has been finally decided in favor of the claimant.

§ 3862.3-3 Corroborative proof required.

The claimant should support his narrative of facts relative to his possession, occupancy, and improvements by corroborative testimony of any disinterested person or persons of credibility who may be cognizant of the facts in the case and are capable of testifying understandingly in the premises.

§ 3862.4 Publication of notice.

§ 3862.4-1 Newspaper publication.

Upon the receipt of applications for mineral patent and accompanying papers, if no reason appears for rejecting the application, the authorized officer will, at the expense of the claimant (who must furnish the agreement of the publisher to hold applicant for patent alone responsible for charges of publication), publish a notice of such application for the period of 60 days in a newspaper published nearest to the claim. If the notice is published in a daily paper, it shall be published in the Wednesday issue for nine consecutive weeks; if weekly, in nine consecutive issues; if semiweekly or triweekly, in the issue of the same day of each week for nine consecutive weeks. In all cases the first day of issues shall be excluded in estimating the period of 60 days.

[35 FR 9756, June 13, 1970, as amended at 41 FR 21642, May 27, 1976]

§ 3862.4-2 Contents of published notice.

The notices published as required by the preceding section must embrace all the data given in the notice posted upon the claim. In addition to such data the published notice must further indicate the locus of the claim by giving the connecting line, as shown by the field notes and plat, between a corner of the claim and a United States mineral monument or a corner of the public survey, and thence the boundaries of the claim by courses and distances.

§ 3862.4-3 Authorized officer to designate newspaper.

The authorized officer shall have the notice of application for patent published in a paper of established character and general circulation, to be by him designated as being the newspaper published nearest the land.

§ 3862.4-4 Charges for publication.

(a) The charge for the publication of notice of application for patent in a mining case in all districts shall not exceed the legal rates allowed by the laws of the several States for the publication of legal notices wherein the notice is published.

(b) It is expected that these notices shall not be so abbreviated as to curtail the description essential to a perfect notice, and on the other hand that they shall not be of unnecessary length. The printed matter must be set solid without paragraphing or any display in the heading and shall be in the usual body type used in legal notices. If other type is used, no allowance will be made for additional space on that account. The number of solid lines only used in advertising by actual count will be allowed. All abbreviations and copy must be strictly followed. The following is a sample of advertisement set up in accordance with Government requirements and contains all the essential data necessary for publication:

> M. A. No. 04421, U. S. Land Office, Elko, Nevada, October 5, 1921. Notice is hereby given that the Jarbidge Buhl Mining Company by W. H. Hudson, attorney in fact, of Jarbidge, Nevada, has made application for patent to the Altitude, Altitude No. 1, Altitude No. 3, and Altitude Annex, lode mining claims. Survey No. 4470, in unsurveyed T. 46 N., R. 58 E., M. D. B. and M., in the Jarbidge mining district, Elko County, Nevada, described as follows: Beginning at corner No. 1, Altitude No. 3, whence the quarter corner of the south boundary of sec. 34 T. 46 N., R. 58 E., M. D. B. and M., bears south 41°54' west 7285.63 feet, thence north 20°14' west 1500 feet to corner No. 2 of said lode; thence north 69°46' east 569 feet to corner No. 3 of said lode; thence south 20°14' east 417.5 feet to corner 2, Altitude No. 1; thence north 69°46' east 1606.1 feet to corner No. 3, Altitude lode; thence south 20°14' east 1500 feet, to corner No. 4 of said lode; thence south 69°46' west 1606.1 feet, to corner No. 1, Altitude No. 1 lode; thence North 20°14' west 417.5 feet to corner No. 4, Altitude No. 3; thence south 69°46' west 569 feet to point of beginning. There are no adjoining or conflicting claims. The location notices are recorded in Book 17, pages 373 and 374, and in Book 15, pages 52 and 53, mining locations, Elko County, Nevada. John E. Robbins, Manager.

(c) For the publication of citations in contests or hearings, involving the character of lands, the charges may not exceed the rates provided for similar notices by the law of the State.

§ 3862.4-5 Proof by applicant of publication and posting.

After the 60-day period of newspaper publication has expired, the claimant will furnish from the office of publication a sworn statement that the notice was published for the statutory period, giving the first and last day of such publication, and his own statement showing that the plat and notice aforesaid remained conspicuously posted upon the claim sought to be patented during said 60-day publication, giving the dates.

§ 3862.4-6 Payment of purchase price and statement of charges and fees.

Upon the filing of the statement required by the preceding section, the authorized officer will, if no adverse claim was filed in his office during the period of publication, and no other objection appears, permit the claimant to pay for the land to which he is entitled at the rate of $5 for each acre and $5 for each fractional part of an acre, except as otherwise provided by law, issuing the usual receipt therefor. The claimant will also make a statement of all charges and fees paid by him for publication and surveys, together with all fees and money paid the authorized officer of the proper office, and a patent shall be issued thereon if found regular.

§ 3862.5 Entry and transfers.

§ 3862.5-1 Allowance of entry; transfers subsequent to application not recognized.

No entry will be allowed until the authorized officer has satisfied himself, by careful examination, that proper proofs have been filed upon the points indicated in the law and official regulations. Transfers made subsequent to the filing of the application for patent will not be considered, but entry will be allowed and patent issued and notice are posted conspicuously upon the claim, giving the date and place of such posting, and two copies of the notice so posted to be attached to and form a part of said statement.

Subpart 3862—Lode Mining Claim Patent Applications

Source: 35 FR 9756, June 13, 1970, unless otherwise noted.

§ 3862.1 Lode claim patent application; general.

§ 3862.1-1 Application for patent.

(a) At the time the proof of posting is filed the claimant must file in duplicate an application for patent showing that he has the possessory right to the claim, in virtue of a compliance by himself (and by his grantors, if he claims by purchase) with the mining rules, regulations, and customs of the mining district or State in which the claim lies, and with the mining laws of Congress, such statement to narrate briefly, but as clearly as possible, the facts constituting such compliance, the origin of his possession, and the basis of his claim to a patent. The application should contain a full description of the kind and character of the vein or lode and should state whether ore has been extracted therefrom; and if so, in what amount and of what value. It should also show the precise place within the limits of each of the locations embraced in the application where the vein or lode has been exposed or discovered and the width thereof. The showing in these regards should contain sufficient data to enable representatives of the Government to confirm the same by examination in the field and also enable the Bureau of Land Management to determine whether a valuable deposit of mineral actually exists within the limits of each of the locations embraced in the application.

(b) Every application for patent, based on a mining claim located after August 1, 1946, shall state whether the claimant has or has not had any direct or indirect part in the development of the atomic bomb project. The application must set forth in detail the exact nature of the claimant's participation in the project, and must also state whether as a result of such participation he acquired any confidential, official information as to the existence of deposits of uranium, thorium, or other fissionable source materials in the lands covered by his application.

(c) In applying for patent to a mining claim embracing land lying partly within one proper office and partly within another, a full set of papers must be filed in each office, except that one abstract of title and one proof of patent expenditures will be sufficient. Only one newspaper publication and one posting on the claim will be required, but proof thereof must be filed in both offices, the statements as to posting plat and notice on the claim to be signed within the respective land districts, as well, also, as all of the other statements required in mineral patent proceedings, except such as, under the law, may be signed outside of the land district wherein the land applied for is situated. Publication, payment of fees, and the purchase price of the land will be further governed by the provisions of § 1823.4(a) and § 1861.2 of this chapter.

§ 3862.1-2 Service charge.

The service charge payable to the Bureau of Land Management for filing and acting upon applications for mineral-land patents is $25 to be paid by the applicant for patent at the time of filing. This charge is not refundable.

§ 3862.1-3 Evidence of title.

(a) Each patent application must be supported by either a certificate of title or an abstract of title certified to by the legal custodian of the records of locations and transfers of mining claims or by an abstracter of titles. The certificate of title or certificate to an abstract of title must be by a person, association, or corporation authorized by the State laws to execute such a certificate and acceptable to the Bureau of Land Management.

(b) A certificate of title must conform substantially to a form approved by the Director.

(c) Each certificate of title or abstract of title must be accompanied by single copies of the certificate or notice of the original location of each claim, and of the certificates of amended or supplemental locations thereof, certified to by the legal custodian of the record of mining locations.

(d) A certificate to an abstract of title must state that the abstract is a full, true, and complete abstract of the location certificates or notices, and all amendments thereof, and of all deeds, instruments, or actions appearing of record purporting to convey or to affect the title to each claim.

(e) The application for patent will be received and filed if the certificate of title or an abstract is brought down to a day reasonably near the date of the presentation of the application and shows full title in the applicant, who must as soon as practicable thereafter file a supplemental certificate of title or an abstract brought down so as to include the date of the filing of the application.

§ 3862.1-4 Evidence relating to destroyed or lost records.

In the event of the mining records in any case having been destroyed by fire or otherwise lost, a statement of the fact should be made, and secondary evidence of possessory title will be received, which may consist of the statement of the claimant, supported by those of any other parties cognizant of the facts relative to his location, occupancy, possession, improvements, etc.; and in such case of lost records, any deeds, certificates of location or purchase, or other evidence which may be in the claimant's possession and tend to establish his claim, should be filed.

§ 3862.1-5 Statement required that land is unreserved, unoccupied, unimproved, and unappropriated.

Each person making application for patent under the mining laws, for lands in Alaska, must furnish a duly corroborated statement showing that no portion of the land applied for is occupied or reserved by the United States, so as to prevent its acquisition under said laws; that the land is not occupied or claimed by natives of Alaska; and that the land is unoccupied, unimproved and unappropriated by any person claiming the same other than the applicant.

§ 3862.2 Citizenship.

§ 3862.2-1 Citizenship of corporations and of associations acting through agents.

The proof necessary to establish the citizenship of applicants for mining patents must be made in the following manner: In case of an incorporated company, a certified copy of its charter or certificate of incorporation must be filed. In case of an association of persons unincorporated, the statement of their duly authorized agent, made upon his own knowledge or upon information and belief, setting forth the residence of each person forming such association, must be submitted. This statement must be accompanied by a power of attorney from the parties forming such association, authorizing the person who makes the citizenship showing to act for them in the matter of their application of patent.

§ 3862.2-2 Citizenship of individuals.

(a) In case of an individual or an association of individuals who do not appear by their duly authorized agent, the statement of each applicant, showing whether he is a native or naturalized citizen, when and where born, and his residence, will be required.

(b) In case an applicant has declared his intention to become a citizen or has been naturalized, his statement must show the date, place, and the court before which he declared his intention, or from which his certificate of citizenship issued, and present residence.

§ 3862.2-3 Trustee to disclose nature of trust.

Any party applying for patent as trustee must disclose fully the nature of the trust and the name of the cestui que trust; and such trustee, as well as the beneficiaries, must furnish satisfactory proof of citizenship; and the names of beneficiaries, as well as that of the trustee, must be inserted in the final certificate of entry.

jects or permanent monuments as will perpetuate and fix the locus thereof.

(b) In case of a lode and mill-site claim in the same survey the expenditure of $500 must be shown upon the lode claim.

§ 3861.2-3 Mineral surveyor's report of expenditures and improvements.

(a) In the mineral surveyor's report of the value of the improvements all actual expenditures and mining improvements made by the claimant or his grantors, having a direct relation to the development of the claim, must be included in the estimate.

(b) The expenditures required may be made from the surface or in running a tunnel, drifts, or crosscuts for the development of the claim. Expenditures for drill holes for the purpose of prospecting and securing data upon which further development of a group of lode mining claims held in common may be based are available toward meeting the statutory provision requiring an expenditure of $500 as a basis for patent as to all of the claims of the group situated in close proximity to such common improvement. Improvements of any other character, such as buildings, machinery, or roadways, must be excluded from the estimate, unless it is shown clearly that they are associated with actual excavations, such as cuts, tunnels, shafts, etc., are essential to the practical development of and actually facilitate the extraction of mineral from the claim.

(c) Improvements made by a former locator who has abandoned his claim cannot be included in the estimate, but should be described and located in the notes and plat.

§ 3861.2-4 Supplemental proof of expenditures and improvements.

If the value of the labor and improvements upon a mineral claim is less than $500 at the time of survey the mineral surveyor may file with the cadastral engineer supplemental proof showing $500 expenditure made prior to the expiration of the period of publication.

§ 3861.2-5 Amended mineral surveys.

(a) Inasmuch as amended surveys are ordered only by special instructions from the Bureau of Land Management, and the conditions and circumstances peculiar to each separate case and the object sought by the required amendment, alone govern all special matters relative to the manner of making such survey and the form and subject matter to be embraced in the field notes thereof, but few general rules applicable to all cases can be laid down.

(b) The expense of amended surveys, including amendment of plat and field notes, and office work in the Bureau of Land Management office will be borne by the claimant.

(c) The amended survey must be made in strict conformity with, or be embraced within, the lines of the original survey. If the amended and original surveys are identical, that fact must be clearly and distinctly stated in the field notes. If not identical, a bearing and distance must be given from each established corner of the amended survey to the corresponding corner of the original survey. The lines of the original survey, as found upon the ground, must be laid down upon the preliminary plat in such manner as to contrast and show their relation to the lines of the amended survey.

§ 3861.3 Mineral surveyors.

§ 3861.3-1 Extent of duties.

The duty of a mineral surveyor in any particular case ceases when he has executed the survey and returned the field notes and preliminary plat, with his report, to the cadastral engineer. He will not be allowed to prepare for the mining claimant the papers in support of his application for patent. He is not permitted to combine the duties of surveyor and notary public in the same case by administering oaths. It is preferable that both preliminary and final oaths of assistants should be taken before some officer duly authorized to administer oaths, other than the mineral surveyor. In cases, however, where great delay, expense, or inconvenience would result from a strict compliance with this section, the mineral surveyor is authorized to administer the necessary oaths to his assistants, but in each case where this is done, he will submit to the proper cadastral engineer a full written report of the circumstances which required his stated action; otherwise he must have absolutely nothing to do with the case, except in his official capacity as surveyor. He will not employ field assistants interested therein in any manner.

§ 3861.3-2 Assistants.

The employing of claimants, their attorneys, or parties in interest, as assistants in making surveys of mineral claims will not be allowed.

§ 3861.4 Contract for surveys.

§ 3861.4-1 Payment.

(a) The claimant is required, in all cases, to make satisfactory arrangements with the surveyor for the payment for his services and those of his assistants in making the survey, as the United States will not be held responsible for the same.

(b) The state director has no jurisdiction to settle differences relative to the payment of charges for field work, between mineral surveyors and claimants. These are matters of private contract and must be enforced in the ordinary manner, i.e., in the local courts. The Department has, however, authority to investigate charges affecting the official actions of mineral surveyors, and will, on sufficient cause shown, suspend or revoke their appointment.

§ 3861.5 Appointment and employment of mineral surveyors.

§ 3861.5-1 Appointment.

Pursuant to section 2334 of the Revised Statutes (30 U.S.C. 39), the Director or his delegate will appoint only a sufficient number of surveyors for the survey of mining claims to meet the demand for that class of work. Each appointee shall qualify as prescribed by the Director or his delegate. Applications for appointment as a mineral surveyor may be made at any office of the Bureau of Land Management listed in § 1821.2-1 of these regulations. A roster of appointed mineral surveyors will be available at these offices. Each appointee may execute mineral surveys in any State where mineral surveys are authorized.

[38 FR 30001, Oct. 31, 1973]

§ 3861.5-2 Employment.

A mineral claimant may employ any United States mineral surveyor qualified as indicated in paragraph (a) of this section to make the survey of his claim. All expenses of the survey of mining claims and the publication of the required notices of application for patent are to be borne by the mining claimants.

§ 3861.6 Plats and notices.

§ 3861.6-1 Payment of charges of the public survey office.

With regard to the platting of the claim and other office work in the Bureau of Land Management office, including the preparation of the copies of the plat and field notes to be furnished the claimant, that office will make an estimate of the cost thereof, which amount the claimant will deposit with it to be passed to the credit of the fund created by "Deposits by Individuals for Surveying Public Lands."

§ 3861.7 Posting.

§ 3861.7-1 Plat and notice to be posted on claim.

The claimant is required to post a copy of the plat of survey in a conspicuous place upon the claim, together with notice of his intention to apply for a patent therefor, which notice will give the date of posting, the name of the claimant, the name of the claim, the number of the survey, the mining district and county, and the names of adjoining and conflicting claims as shown by the plat of survey.

§ 3861.7-2 Proof of posting on the claim.

After posting the said plat and notice upon the premises the claimant will file with the proper manager two copies of such plat and the field notes of survey of the claim, accompanied by two copies of the statement of at least two credible witnesses that such plat

PART 3860—MINERAL PATENT APPLICATIONS

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Subpart 3861—Surveys and Plats

SOURCE: 35 FR 9754, June 13, 1970, unless otherwise noted.

§ 3861.1 Surveys of mining claims.

§ 3861.1-1 Application for survey.

The claimant is required, in the first place, to have a correct survey of his claim made under authority of the proper cadastral engineer, such survey to show with accuracy the exterior surface boundaries of the claim, which boundaries are required to be distinctly marked by monuments on the ground. He is required to have a correct survey where patent is applied for and where the mining claim is in vein or lode formation, or covers lands not surveyed in accordance with the U.S. system of rectangular surveys, or where the mining claim fails to conform with the legal subdivisions of the federal surveys. Application for authorization of survey should be made to the appropriate land office (see § 1821.2-1 of this chapter).

[Circ. 2220, 31 FR 16785, Dec. 31, 1966]

§ 3861.1-2 Survey must be made subsequent to recording notice of location.

The survey and plat of mineral claims required to be filed in the proper office with application for patent must be made subsequent to the recording of the location of the claim (if the laws of the State or the regulations of the mining district require the notice of location to be recorded), and when the original location is made by survey of a mineral surveyor such location survey cannot be substituted for that required by the statute, as above indicated. All matters relating to the duties of mineral surveyors, and to the field and office procedure to be observed in the execution of mineral surveys, are set forth in Chapter X of the Manual of Instructions for the Survey of the Public Lands of the United States, 1947.

§ 3861.1-3 Plats and field notes of mineral surveys.

When the patent is issued, one copy of the plat and field notes shall accompany the patent and be delivered to the patentee.

§ 3861.2 Surveys; specific.

§ 3861.2-1 Particulars to be observed in mineral surveys.

(a) The following particulars should be observed in the survey of every mining claim:

(1) The exterior boundaries of the claim, the number of feet claimed along the vein, and, as nearly as can be ascertained, the direction of the vein, and the number of feet claimed on the vein in each direction from the point of discovery or other well-defined place on the claim should be represented on the plat of survey and in the field notes.

(2) The intersection of the lines of the survey with the lines of conflicting prior surveys should be noted in the field notes and represented upon the plat.

(3) Conflicts with unsurveyed claims, where the applicant for survey does not claim the area in conflict, should be shown by actual survey.

(4) The total area of the claim embraced by the exterior boundaries should be stated, and also the area in conflict with each intersecting survey, substantially as follows:

	Acres
Total area of claim	10.50
Area in conflict with survey No. 302	1.56
Area in conflict with survey No. 948	2.33
Area in conflict with Mountain Maid lode mining claim, unsurveyed	1.48

(b) It does not follow that because mining surveys are required to exhibit all conflicts with prior surveys the area of conflict with prior surveys the area of conflict are to be excluded. The field notes and plat are made a part of the application for patent, and care should be taken that the description does not inadvertently exclude portions intended to be retained. The application for patent should state the portions to be excluded in express terms.

§ 3861.2-2 Certificate of expenditures and improvements.

(a) The claimant at the time of filing the application for patent, or at any time within the 60 days of publication, is required to file with the authorized officer a certificate of the office cadastral engineer that not less than $500 worth of labor has been expended or improvements made, by the applicant or his grantors, upon each location embraced in the application, or if the application embraces several contiguous locations held in common, that an amount equal to $500 for each location has been so expended upon, and for the benefit of, the entire group; that the plat filed by the claimant is correct; that the field notes of the survey, as filed, furnish such an accurate description of the claim as will, if incorporation in a patent, serve to identify the premises fully, and that such reference is made therein to natural obwith the fine ore placed in storage bins. Subsequently, the fine ore would be conveyed to rod and ball mills to be ground in a slurry to sufficiently small particles to liberate the molybdenite from the country rock. The ore in the slurry would then be pumped to flotation cells where molybdenite concentrates would be floated. Then, the concentrates would be filtered, dried and placed in containers for shipment to market. While the milling facilities would be located adjacent to the mine, the concentrates would be trucked approximately 10 miles to a dock at tidewater and would be barged from there to a port for shipment to ultimate domestic and foreign consumers.

Total costs (in 1979 dollars) were estimated by PCM to run $5.31 per ton. 7/ At an average grade of sixteen-hundredths percent MoS_2, assuming 83 percent mill recovery and that sales would be equally divided between domestic and foreign markets, gross returns were expected to be $12.82 per ton, thereby leaving a net profit of $7.51 per ton. 8/ According to the first supplement, included in the production costs estimate was $5,563,000

7/ The cost breakdown was as follows:

Operating Costs	Dollars per Ton	
Mining	$1.72	
Milling	2.13	
Transportation	0.07	
		$3.92
Depreciation		
Environmental	0.02	
Facilities	1.37	
		$1.39
		$5.31

8/ For some unexplained reason, PCM, having stated in its original patent application that the average grade of the deposit was 0.15 percent MoS_2 (see Patent Application at 8), used an average grade of 0.16 percent MoS_2 in calculating its return in the Second supplement. If the deposit does have an average grade of 0.15 percent as originally contended (and which is also the figure used by the Forest Service), PCM would receive gross returns of $12.02 per ton, with a net profit of $6.71 per ton, assuming the correctness of its other assumptions.

to defray the anticipated costs of meeting Federal, state, and local environmental and reclamation permitting requirements. Included in this $5.5 million figure were the costs necessary to generate baseline environmental data. An additional $400,000 was allocated to environmental monitoring (see Second Supplement at Item 11). Costs of reclamation after mining were estimated to be $4,675,000. Special note must be made of the fact that, while PCM asserted that costs of specialized equipment needed to meet environmental standards were included in the cost per ton figure under the mining or milling costs, where appropriate, no specific figures relating to these costs were included in any of its submissions.

As noted above, prerequisite to the issuance of patent is a physical examination of the claims by a Government mineral examiner. An examination of these claims was conducted by two Government mineral examiners, Wesley G. Moulton and Don E. Williams. 9/ A report of their findings (hereinafter the Moulton-Williams Report) was prepared for the Forest Service which transmitted the report to BLM.

The Moulton-Williams Report estimated total tonnage at 776,830,000 tons of proven reserves at fifteen-hundredths percent MoS_2. Preproduction costs were estimated to amount to $400,000,000. The production costs were determined to be $3.585 a ton with production and milling costs determined to be $2.13 per ton. At an annual production of 14,600,000 tons per year this amounted to annualized costs of $52,341,000. We note, however, that an

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9/ The examination actually encompassed a total of 49 claims, 17 of which are not involved in this patent application.

examination of Exhibit F, which contained the Report's costs computations shows that the authors made two transpositional and one arithmetical error in calculating mining costs. On page 26, they show haulage costs of $1,668,000. The actual figure which they developed was $1,168,000. Additionally, cleanup costs should have been $262,800 rather than $292,000. Finally, an addition error of this column amounting to $500 was also made. Thus, the total given for annual operating expenses overstated the costs by $530,500 assuming the correctness of the Moulton-Williams Report's assumptions. Correcting their final figures to reflect this fact, production costs would be $3.565 per ton and total annual production costs would be $52,049,000.

These corrections are relatively minor compared to the noticeable differences between the figures used by the Moulton-Williams Report as to per ton production costs and selling price per pound of Mo, compared to those used by PCM in its application. Thus, PCM had estimated production costs of $5.31 per ton and a selling price of $8.05 per pound of Mo. The Moulton-Williams Report, on the other hand estimated production costs of $3.565 per ton and a selling price of $5.86 per pound of Mo. We will return to the discrepancy, infra. For our purposes at this time, it is enough to note that, based on the Moulton-Williams Report, the Regional Forester recommended clearlisting of the mineral patent application. Upon receipt of the Forest Service recommendation, BLM requested the Bureau of Mines to run a cash flow analysis. In its report, dated May 4, 1981, the Bureau of Mines noted that the breakeven point over a 20-year life at a zero rate of return was $4.05 per pound of molybdenum, a price which, at the time of the Moulton-Williams Report, was less than half the going price of molybdenum. The Bureau of Mines assumed mining costs of $2.17 per ton and milling costs of $2.71 per ton.

Appellants suggest that PCM's patent application was deficient in that it did not adequately assess development costs, including those of environmental protection and reclamation. To the extent that appellants are contending that PCM's application must be viewed in isolation from the Government's subsequent studies, appellants are in error. Regardless of whether BLM might have rejected the patent application because of informational deficiencies (but see United States Steel Corp., supra), the fact is that BLM did not so act. Rather, it processed the application and caused its own studies to be made. These studies corroborated PCM's discovery. These studies are part of the record before this Board and must be considered in determining whether or not appellants have established error in the denial of their protests. In other words, the studies done by the Government may be used to supply any informational gaps that might exist in the patent application standing alone. See In Re Lick Gulch Timber Sale, 72 IBLA 261, 273 n.6, 90 I.D. 189, 196 n.6 (1983).

Appellants suggest that there are unexplained discrepancies in the cost figures used by PCM, Moulton-Williams, and the Bureau of Mines in their respective analyses. We have already indicated above that these variances do exist on both the cost and sale sides. Insofar as the sale price of molybdenum concentrate is concerned, part of the problem has been the extreme volatility of the molybdenum market in recent years. As charted by the Engineering and Mining Journal over the past few years, the price for molybdenum concentrates has been on a virtual roller coaster. Using figures posted at the Climax mine in Colorado, in January 1978, the price of a one lb. cont. Mo, 95 percent MoS_2, was \$4.01, in January 1979, the price had risen to \$5.86, by January 1980 it had jumped to \$8.84, in January 1981 it was \$9.20, in January

1982 it was back down to $8.75, and in January 1983, during the height of the recession, pricing was suspended by Climax, though there was no question that prices had fallen precipitously.

PCM used the price of molybdenum concentrates as of December 1, 1979. The Moulton-Williams Report used the December 1978 price. The Bureau of Mines analysis merely noted that $4.05 was the breakeven point and that, at then present prices (May 1981), the price for molybdenum concentrates was nearly double this. Appellants suggest that the market price for molybdenum was artificially high from 1973-1980 (Affidavit of Stephen O. Anderson at 5), and argue that the December 1978 price was elevated because of low inventories due to a strike at one mine and lower production of copper, which often produces molybdenum as a by-product. 10/ They suggest that at the January 1983 price, PCM could not make a profit even using its cost figures.

[2] Appellants' argument crystallizes a problem inherent in the application of the marketability rule. While no prudent man would expend time and money to develop a mine where it is clear that there is no market for the mineral or the price that could be obtained is obviously less than the cost of production, the question of prudence becomes more difficult when the mineral involved is subject to great price volatility. Many minerals, including molybdenum, show marked price elasticity for both the demand and supply fluctuations. Thus, either increased demand or decreased supply in the short term can often result in elevated prices which cannot be sustained over a

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10/ In 1981, for example, 34 percent of molybdenum mined constituted a by-product of copper mining. *See generally* *Minerals Yearbook*, 1981 at 604.

long period of time. The same, however, is true on the downside. Molybdenum, which is primarily used in steel production, is particularly price sensitive to developments in the steel industry. The sharp 1981-83 recession, with its attendant massive decline in steel production, necessarily depressed molybdenum prices on a world-wide scale.

"Present marketability" has never encompassed the examination of either cost or price factors as of a specific, finite moment of time, without reference to other economic factors. Rather, the question of whether something is "presently marketable at a profit" simply means that a mining claimant must show that, as a present fact, considering historic price and cost factors and assuming that they will continue, there is a reasonable likelihood of success that a paying mine can be developed. For example, if a claimant has located a deposit of gold which can be mined at a profit, if the price of gold is $500 an ounce, and the evidence is such that there is a reasonable likelihood of sufficient quantity and quality to justify development, that claim can be deemed valid despite the fact that on any specific day gold may be selling at $420 an ounce. This is so because a selling price of $500 an ounce for gold is both within the historic range and expectations of it reaching that level again can be justified as a present matter. On the other hand, if the deposit, because of expenses associated with mining and beneficiation, requires a selling price of $1,500 an ounce, such a claim does not exhibit present marketability. So elevated a price for gold does not represent any relevant historic range and is essentially based on speculation or unsupported hope. It may be an expectation, but it is an unreasonable one given present facts. See United States v. Denison, 76 I.D. 233, 239 (1969).

We recognize that situations can occur in which structural economic changes or technological breakthroughs invalidate historical conditions as a guide to present marketability. Thus, in United States v. Denison, supra, cessation of a Government stockpiling program which had greatly elevated manganese prices, served to render these past prices irrelevant to the question of present marketability. It was, of course, not beyond the realm of possibility that a future stockpiling program might some day be initiated. Such a possibility, however, was essentially speculative and could not serve as a predicate upon which a prudent man would have proceeded to expend time and money with a reasonable hope of success.

The question, then, is whether the presently depressed state of molybdenum prices represent merely a sharp swing in normal market fluctuations or, in fact, is an indication of a major structural alteration in the market which renders irrelevant past economic experience. Appellants have tendered nothing which would justify a conclusion that a permanent structural alteration in the molybdenum market has occurred. Thus, the question of the present marketability is properly determined by reference to the historic range of values. We feel that, on the basis of the record before us, the January 1979 value used by PCM to show marketability as of the date of the withdrawal can be used to show present marketability as of today.

Appellants focus on the admitted failure of PCM to expressly delineate the individual costs attendant to compliance with specific environmental standards, e.g., the Federal Water Pollution Control Act, 33 U.S.C. § 1251 (1976). Appellants do not suggest that PCM will be technologically unable to comply with applicable environmental constraints. Nor have they even provided estimates of what they believe the costs will be. Rather, they have contented themselves with postulations that "it cannot be substantiated that economic viability in fact either existed in 1978 or exists today" and that "environmental costs may be as much as five to ten times larger than those estimated by the company (approximately $1 million per year) on the basis of comparable deposits" (Affidavit of Arnold J. Silverman at 3, 4). These statements, however, miss the point that appellants bear the burden of showing that the cost figures used by PCM and BLM are so understated that a reasonable likelihood of success in developing a paying mine does not exist. It is not enough to merely suggest that such might be the case. Appellants are required to show that such is the case.

Admittedly, PCM's application did not attempt to isolate individual cost factors beyond those associated with licensing and ultimate reclamation. The Moulton-Williams Report, which also showed the claims' profitability, noted that "due to the environmental problems unique to the Quartz Hill area, $0.045 per ton was allowed to cover additional protection, mitigation, and rehabilitation measures." Moulton-Williams Report, Exhibit F, at 28. We have noted above that there are great areas of disparity among the three studies of profitability. They all, however, agreed that a discovery existed.

Appellants have not submitted cost analyses which would show that the claims could not be mined profitably. Indeed, they do not even argue that these claims could not, as a fact, be profitably developed. Rather, they merely argue that they might not be capable of profitable development. They proffer no figures to support this conclusion beyond bare assertions that environmental protection might cost on the order of five to ten times more than estimated. However, even if this is the case, the three studies indicate that the instant claims could still be mined at a profit. Appellants bore the burden of showing that these claims could not be economically developed. This burden they did not discharge.

[3] Appellants also suggest that because of ANILCA the prudent man marketability test must be "strictly" applied. Thus, they suggest "a stronger showing of marketability is required for important recreation areas, such as Misty Fjords, than for other public lands" (Reply Brief at 19). It is true that a number of cases in the past have indicated that a higher standard of proof is required for claims located in national forests than for other public lands. In actual practice, the Board has long since abandoned this position. We take this opportunity to expressly repudiate it.

The genesis of this rule in the Department lies in cases such as United States v. Dawson, 58 I.D. 670 (1944), and United States v. Langmade, 52 L.D. 700 (1929). All of these early cases, as well as the Federal court decisions on which they were based (United States v. Lillibridge, 4 F. Supp. 204 (S.D. Cal. 1932); United States v. Lavenson, 206 F. 755 (W.D. Wash. 1913)), involved fact situations which called into question the bona fides of the mineral claimant. In Dawson and Langmade millsites and mining claims had been located on lands valuable for recreation sites and there were specific indications that the claims were a mere subterfuge to acquire title to these sites for purposes not associated with mining. Lillibridge involved the same problem, whereas Lavenson involved allegations that land valuable for water power was being acquired under the general mining laws. Particularly instructive is the following language from the Lavenson opinion, which involved a Government suit to cancel a patent:

> The land must not only be located for valuable deposits, but claimed for such deposits, when patent is asked. If the sole purpose of location, or making claim to the land, when patent is sought, is to secure valuable water power or timber, a claimant is not entitled to it under the mineral land law. [Emphasis supplied]. The decision of the Supreme Court by Justice Field, in the last-mentioned cause, does not justify any other assumption, for therein it is said:
>
> "If the land contains gold * * * which can be secured with profit, that fact will satisfy the demand of the government as to the character of the land as placer ground, whatever the incidental advantages it may offer to the applicant for a patent." [Emphasis in original.]
>
> If the claimant represents that he claims the land for its valuable deposits, when in fact he does not, and if, but for such representation, he would not receive a patent, but, relying on it, he is granted one, this is fraud.

206 F. at 763.

Subsequent decisions, however, ignored the clear basis of this rule and blindly applied the standard to all lands in national forests. Indeed, in United States v. Gray, A-28710 (Supp.) (May 7, 1964), the Deputy Solicitor attempted to premise the rule on a totally different basis. Thus, he stated that "[w]hile it is also clear that valid mining claims may be perfected within the limits of forest reservations, it is also clear that the validity of such mining claims is to be determined by a comparison of the relative value of the lands in question for forest or mineral purposes." No citation accompanied this statement, as the law did not support it. Indeed, in Cataract Gold Mining Co., 43 L.D. 248 (1914), the Department expressly held:

> [I]f a mineral claimant is able to show that the land contains mineral of such quantity and value as to warrant a prudent man in the expenditure of his time and money thereupon, in the reasonable expectation of success in developing a paying mine, such lands are disposable only under the mineral laws, notwithstanding the fact that they may possess a possible or probable greater value for agriculture or other purposes.

Id. at 254. This holding was reaffirmed in United States v. Langmade, supra at 705 (a case actually cited subsequently in United States v. Gray, supra, for a different proposition), and more recently in this Board's decision in United States v. Kosanke Sand Corp. (On Reconsideration), 12 IBLA 282, 299-302, 80 I.D. 538, 547-48 (1973).

Having invoked the comparative value test in Gray, however, the Deputy Solicitor then proceeded to state that "I think it is reasonable, and entirely in accordance with prior Departmental and judicial decisions, to apply a higher standard and more rigid compliance with the requirements of the mining law where the claim is located within a National Forest." Thus was the standard separated from its moorings in considerations of bona fides.

As a conceptual matter, the theory that the situs of the land alters the nature of the test applied is untenable. Where the mining laws apply, they necessarily apply with equal force and effect, regardless of the characteristics of the land involved. The test of discovery is the same whether the land be unreserved public domain, land in a national forest, or even land in a national park. 11/

11/ This discussion assumes the validity of the location. Thus, where land is closed to mineral entry, a subsequent discovery is irrelevant as the mining laws no longer apply so as to permit a discovery.

This does not mean that questions of good faith are irrelevant. On the contrary, even if a discovery can be shown to exist, proof of bad faith can invalidate a claim, since in such a situation the mineral values are incidental to the purpose for which the land is claimed. See United States v. Lavenson, supra. But this is, essentially, an independent question from that involved in determining the existence of a discovery. The Board has noted that where the issue of bad faith is raised, the Government bears the ultimate burden of proof. See United States v. Prowell, 52 IBLA 256 (1981); United States v. Dillman, 36 IBLA 358 (1978). Imposing a higher standard of discovery by relying on the situs of the land embraced by the claim is, in effect, an attempt to shift the burden of proof sub rosa. In any event, appellants have failed to submit any credible evidence that these claims are not held in good faith. Thus, even were a different test for discovery applicable where bona fides is in question, which we expressly hold is not the case, it would not be applicable herein. 12/

Appellants also suggest that an EIS is required to be prepared prior to issuance of the mineral patent. In United States v. Kosanke Sand Corp. (On Reconsideration), supra, we considered this contention at some length. We

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12/ Appellants also suggest a more rigid standard is applicable because of the language of section 503(f)(2)(A) which requires that activities on the claims should be regulated "to assure that such activities are compatible to the maximum extent feasible, with the purposes for which the monuments were established." We disagree. First of all, nothing in this section arguably relates to the test for validity, since the section presupposes valid claims. But secondly, and more importantly, this section actually provides that if there is an irrevocable conflict between mining any valid claims and the purposes for which the monument was established, the latter must give way, where regulations to ensure compatibility are not "feasible." As we read the Ninth Circuit's decision in SEACC v. Watson, 697 F.2d 1305 (1983), the Court merely found that preparation of an EIS for either bulk sampling or a road was not infeasible and indeed had been expressly provided for by section 503(h)(3).

will not repeat that analysis here. We will simply note that the Board, en banc, unanimously held issuance of a mineral patent was not a "major Federal action" within the ambit of section 102 of the National Environmental Policy Act, 42 U.S.C. § 4332 (1976), as such action was not discretionary nor did the act of issuing the patent result in significant effects on the quality of the human environment. This holding was reaffirmed in United States v. Pittsburgh Pacific Co., 30 IBLA 388, 84 I.D. 282 (1977). This latter decision was, itself, affirmed by the Eighth Circuit Court of Appeals sub nom. South Dakota v. Andrus, 614 F.2d 1190, cert. denied, 449 U.S. 822 (1980). We adhere to our position.

[4] The last issue pressed in the appeal is whether PCM is qualified to receive patent for these claims. Section 1 of the Mining Law of 1872 states that "[e]xcept as otherwise provided, all valuable mineral deposits in lands belonging to the United States * * * shall be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States." Act of May 10, 1872, 17 Stat. 91, 30 U.S.C. § 22 (1976). Section 7 of the 1872 Act further provides that "[p]roof of citizenship * * * may consist * * * in the case of a corporation organized under the laws of the United States, or any State or Territory thereof, by the filing of a certified copy of their charter or certificate of incorporation." Act of May 10, 1872, 17 Stat. 94, 30 U.S.C. § 24 (1976).

Appellants argue that, while PCM is a corporation organized under the laws of the State of Nevada, it is, in point of fact, a wholly owned subsidiary, through a web of corporate holdings, of Rio Tinto-Zinc Corporation, Limited, a United Kingdom corporation. See note 2, infra. Both PCM and the Solicitor's Office contend that proof of incorporation under the laws of a state gives rise to a conclusive presumption of citizenship in that state.

The question of the authority of a corporation to locate mining claims was first examined in McKinley v. Wheeler, 130 U.S. 630 (1889). Justice Field, speaking for a unanimous court, stated that the provisions of section 1 of the Mining Law of 1872 "must be held not to preclude a private corporation formed under the laws of a State, whose members are citizens of the United States, from locating a mining claim on the public lands of the United States." (Emphasis supplied.) Id. at 636. While the underlined language in this decision might be read as an implicit holding that all of the members of a corporation must, themselves, be citizens of the United States, it actually was merely a restatement of the averments of the appellant therein, that all of the stockholders of the corporation were, in fact, citizens of the United States.

The first case to directly examine the question of the subsidiary citizenship requirements of stockholders of a domestic corporation was Doe v. Waterloo Mining Co., 70 F. 455 (9th Cir. 1895). That case involved the question whether, having alleged domestic incorporation, it was also necessary to allege that the stockholders were citizens of the United States. The Court's response was guided by two factors. First, it noted that section 7 of the Mining Law of 1872 provided that proof of citizenship could be established for a corporation by the filing of a certificate of incorporation. As the Court noted:

> The question might arise, why would the certificate of incorporation establish the citizenship of the stockholders? In considering the question of jurisdiction in the federal courts, it is an established rule that, when a corporation organized under state laws is a party, it is conclusively presumed that the stockholders thereof are all citizens of that state. Muller v. Dows, 94 U.S. 445. Congress was familiar with this rule, and it seems probable intended to establish a similar rule under the mineral land act of 1872.

70 F. at 463.

The Court's second line of analysis proceeded from the actual practice of the Department of the Interior. Thus, the decision stated:

> The practice in the United States land office has been, I think, universal, not to require of a corporation seeking to patent mining ground proof of the citizenship of its stockholders, other than by the production of a certified copy of articles of incorporation. * * * The practice in the land department of the United States under this statute should have great weight in construing it. Hahn v. U.S., 107 U.S. 402, 2 Sup. Ct. 494; U.S. v. Moore, 95 U.S. 760; Brown v. U.S., 113 U.S. 568, 5 Sup. Ct. 648. Considering the statute and the practice thereunder, I think the citizenship of the stockholders of the Waterloo Mining Company was sufficiently established. It was not necessary to allege in the answer what was conclusively presumed from the facts alleged.

Id.

Practice in the Department was, indeed, as indicated by the Court. Thus, Secretary Hitchcock stated "a corporation organized under the laws of the United States or of any State or Territory thereof may * * * occupy and purchase mining claims from the government, irrespective of the ownership of stock therein by persons, corporations or associations not citizens of the United States." Opinion, 28 L.D. 178, 180 (1899). This was reiterated in the Instructions published at 51 L.D. 62 (1925) relating to the right of United States Borax Company, having been acquired by Borax Consolidated, Ltd., to hold and patent mining claims. This interpretation has continued to the present day. See 43 CFR 3862.2-1; Alien Ownership of Shares in a Corporate Mining Location, M-36738 (July 16, 1968). Appellants have failed to show why this consistent interpretation, stretching over nearly a century of adjudication, should be abandoned at this late date. See State of Wyoming, 27 IBLA 137, 83 I.D. 364 (1976), aff'd sub nom. Wyoming v. Andrus, 602 F.2d 1379 (10th Cir. 1979). We decline to alter the rule that proof of incorporation in a state is conclusive proof of citizenship by the stockholders.

In summation, we hold that appellants have failed to show error in the denial of their protests, that issuance of a mineral patent is not a major Federal action requiring the preparation of an EIS, and that proof of incorporation under the laws of a state establishes the citizenship of a corporation for the purposes of the Mining Law of 1872.

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is affirmed.

James L. Burski

James L. Burski
Administrative Judge

We concur:

Bruce R. Harris

Bruce R. Harris
Administrative Judge

Douglas E. Henriques

Douglas E. Henriques
Administrative Judge

J.R. Evans

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BEFORE THE UNITED STATES DEPARTMENT OF INTERIOR
DIRECTOR OF THE BUREAU OF LAND MANAGEMENT

UNITED STATES OF AMERICA,
Contestant and Respondent,
v.
LYLE COOK; BEVERLY COOK; ROBERT E. RIDDELL; PATRICIA RIDDELL,
Contestees and Appellants.

I.B.L.A. No. 83-34
Contest No. CA 5747

REQUEST OF PACIFIC LEGAL FOUNDATION TO APPEAR AS AMICUS CURIAE AND COMMENTS OF PACIFIC LEGAL FOUNDATION REGARDING CONTESTEES' APPEAL TO THE DIRECTOR OF THE BUREAU OF LAND MANAGEMENT OF I.B.L.A. CASE NO. 83-34 (CONTEST NO. CA 5747)

REQUEST TO APPEAR AS AMICUS CURIAE

Pacific Legal Foundation (PLF) is a tax-exempt public interest organization with over 18,000 contributors located throughout the country. Policy is set by a 17-member Board of Trustees. Since its establishment in 1973, PLF has been actively engaged in research and litigation over a broad spectrum of public interest issues. One of the basic philosophies of PLF is that governmental regulations and guidelines should be promulgated in accordance with statutory authority and based on common sense. PLF requests the opportunity pursuant to 43 C.F.R. § 4.3(c) (1981) to appear as amicus curiae for the purpose of submitting comments which address Bureau of Land Management (BLM) guidelines establishing the legal standard for determination of the validity of a nonpatented mining claim. The request is made and comments submitted because PLF believes that the congressional intent in passing laws should be followed yet is not being followed by BLM in mining contests.

The Foundation has carefully observed the impact BLM's regulations and internal guidelines have had on the validity of mining claims and the rights of miners to engage in reasonable mineral exploration and mineral development on public lands. There is no doubt that the current regulations in many instances misconstrue statutory intent and rely on case law which itself misunderstood the original intent of the enabling mining laws. Because the current guidelines have crystallized mistakes of earlier case law and in so doing have foreclosed needed mineral development of public lands time after time, it is essential that these guidelines be recognized as invalid when not conforming to intended legislative direction. It is for the purpose of demonstrating this lack of conformance as related to the subject appeal that PLF respectfully requests that it be granted amicus curiae status herein.

COMMENTS OF PACIFIC LEGAL FOUNDATION

The subject appeal depends in significant part upon the appropriate legal standard to be applied for determination of the validity of an unpatented mining claim when a contest is filed by the government. The purpose of these comments is to articulate for the record what should be considered the correct legal standard. This standard unfortunately was misinterpreted by the administrative law judge and the Interior Board of Land Appeals when reaching their decisions in this case. For this reason PLF believes it necessary to make this submission.

Under current regulations, to maintain a valid claim, the claim holder must prove the ore from his claim can be "presently marketed at a profit." This places an extremely heavy burden of proof on unpatented claim holders, which was never contemplated by statute. See United States v. Pittsburgh Pacific Co., 30 I.B.L.A. 388, 84 I.D. 282 (1977). It is to be emphasized that this burden of proof must be met just to establish the discovery required to locate and establish a valid, unpatented mining claim regardless of whether the claim has reached the patentable stage. This requirement that an unpatented mining claim holder must prove his claim is patentable is explicitly stated in Forest Service Manual § 2811.5, which states:

> "The term 'valid claim' often is used in a loose and incorrect sense to indicate only that the ritualistic requirements of posting of notice, monumentation, discovery work, recording, annual assessment work, payment of

> taxes, etc., have been met. This overlooks, the basic requirement that the claimant must discover a valuable mineral deposit. Generally, a valid claim is a claim that may be patented." (Emphasis added.)

As will be shown below, such a strict validity standard is appropriate, however, only when a claim holder moves to patent his claim and the government gives up all its rights in the land. The standard is inappropriate to establish a valid unpatented mining claim wherein the miner gets only possessory rights to the land and its minerals.

The genesis of above strict requirement was a misinterpretation in the case of United States v. Carlisle, 67 I.D. 417 (1960), that the same quantum of mineralization was required for location as was required for patent. The Carlisle decision was based upon a misreading of early cases wherein marketability originally meant salability. Profitability was not a factor except that if profitability did exist then the prudent man rule was more than satisfied. Instead of a "reasonable prospect of success," there was "a present marketability at a profit." Carlisle, however, merged salability and marketability into a present profitability standard. The progeny of Carlisle which includes United States v. Coleman, 390 U.S. 599 (1968), and current Interior Board of Land Appeals decisions have uncritically retained this improper standard. By blurring the distinction between the standard required to establish a valid unpatented mining claim and that required to establish a valid patented mining claim, the task of proving a valid unpatented mining claim not yet developed to the stage of patentability has become virtually impossible.

It should be noted that there is a commonsense rationale for establishing that the level of proof of mineralization required for a patent should not be required to validate unpatented claims. The incidents of ownership in unpatented claims are far less than in patented claims. Also the purposes of the two types of ownership are different. An unpatented claim is an official notification that a location of ore has been made and other miners may not prospect the same piece of ground. At this stage of the mining process, a less demanding standard for a valid unpatented claim is necessary to encourage development of the claim in order to determine whether a valuable mine actually exists. A patented claim, on the other hand, is the reward a miner can look forward to when he has not only located mineralization, but has engaged in costly exploration and development since staking the claim, and is able to show he can presently extract minerals on a profitable basis.

It is submitted, therefore, that United States v. Coleman has been too rigidly interpreted so as to foreclose "prospective marketability" or salability as sufficient to support the validity of unpatented claims. Because previous cases unmistakably document that prospective marketability is an appropriate alternative standard, the proper interpretation would be to cite Coleman for the proposition that "present marketability at a profit" is but one way to prove validity but not the only way.

Therefore, the decision on appeal should be remanded with instructions to utilize the "prospective marketability" standard in addition to the "present marketability at a profit" standard in determining whether the unpatented mining claims of contestees herein are valid.

DATED: May 13, 1983.

Respectfully submitted,

RONALD A. ZUMBRUN
ROBIN L. RIVETT

By Robin L. Rivett
ROBIN L. RIVETT

Attorneys for Pacific Legal
Foundation

DECLARATION OF SERVICE BY MAIL

I, Blanka Risko, declare as follows:

I am a citizen of the United States, residing or employed in Sacramento, California.

My business address is 455 Capitol Mall, Suite 600, Sacramento, California.

I am over the age of 18 years and am not a party to the above-entitled action.

On May 16, 1983, true copies of REQUEST OF PACIFIC LEGAL FOUNDATION TO APPEAR AS AMICUS CURIAE AND COMMENTS OF PACIFIC LEGAL FOUNDATION REGARDING CONTESTEES' APPEAL TO THE DIRECTOR OF THE BUREAU OF LAND MANAGEMENT OF I.B.L.A. CASE NO. 83-34 (CONTEST NO. CA 5747) were placed in envelopes addressed to:

Wilbur Jennings
Regional Attorney
United States Department
of Agriculture
Two Embarcadero Center
Suite 860
San Francisco, CA 94111

Interior Board of Land Appeals
4015 Wilson Boulevard
Arlington, VA 22203

George W. Kell
201 E. Rumble Road
Suite A-2
P.O. Box 6805
Modesto, CA 95355

which envelopes, with postage thereon fully prepaid, were then sealed and deposited in a mailbox regularly maintained by the United States Postal Service in Sacramento, California.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed this 16th day of May, 1983, at Sacramento, California.

BLANKA RISKO

March 3 1849

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

IN REPLY REFER TO:
3860 (520)

EVANS

July 22, 1982

1) Larry
2) Route to Staff leads

"EXCESS RESERVE RULE"

PERLITE

Information Memorandum No. 82-247
Expires 9/30/83

DEPT. OF INTERIOR
BUR OF LAND MGT
FOLSOM DIST. OFFICE
JUL 29 1982
AM PM
7.8.9.10.11.12.1.2.3.4.5.6

To: All Field Officials

From: Director

Subject: Demise of the "Excess Reserves Rule," October 20, 1980

Excess Reserves Chronology

Solicitor's Opinion M-36642 September 20, 1962:

"The Marketability Rule" (69 ID 145)

> "An intrinsically valuable mineral by its very nature is deemed marketable, therefore merely showing the nature of the mineral usually meets the test of marketability. On the other hand, where we are concerned with a nonmetallic mineral found in a great many places, application of the prudent man test requires that a market for the mineral be shown by the locator." "When a nonmetallic mineral is not of extremely wide occurrence and when a general demand for that mineral exists, it may be enough, instead of showing an actually existing market for the products of that particular mine, to show that a general market for the substance exists of a type which a reasonably prudent man would be justified in regarding as one in which he could dispose of those products."

United States v. Robert E. Anderson Jr. et al. A-28260 (Supp)

October 18, 1967 (74 ID 292).

This case dealt with 16 perlite claims that in 1957 had sufficient reserves for a 240-year mining operation at 400 tons per day. The board found several key factors in this case.

> "What must be shown is that at the present time there is an existing market and that there is a reasonable justification for believing that the product of each claim can be disposed of in that market at a profit." (Emphasis added.)

> "If a patent were to issue for all the claims, it is extremely unlikely that the claimants would, or could economically, exploit most of them for years to come."

Appendix 8

> "Justification exists only for holding valid those claims which would supply contestee with the deposits necessary to carry on an operation if the size they contemplate for a reasonable period of time, for in a hard economic sense only those deposits have a reasonable prospect of a market."

The claimants had amortized their capital investment over a 10-year period, the Department allowed them a 30-year reserve, held those claims valid, and declared the claims containing the excess reserves invalid for lack of discovery. This was based on the above discussion of present as opposed to future markets.

Three cases dealing with this issue arose subsequently in the 1970's all dealing with non-metallic minerals. These commodities were gypsite, sand and gravel, and cinders.

United States v. Henrietta Bunkowski and Andrew Julius Bunkowski. (5 IBLA 10, March 7, 1972 [79 ID 43]).

This case dealt with 7 placer claims located for gypsite in the 1940's and 1960's. The gypsite was marketed from 1947 to the time of the hearing at a profit. The board ruled that gypsite was a locatable mineral. The claimants demonstrated a 150 year reserve of gypsite at their current mining rate.

Based on the Department's finding in Robert E. Anderson Jr. et al. (supra), the Board directed the Bureau to re-examine the claims to determine the reserves of gypsite on each of the claims, the object being to allow patent on only a reasonably marketable portion of the seven claims.

United States v. Lauren W. Gibbs, et al. (13 IBLA 382, November 21, 1973).

The case dealt with sand and gravel placer claims that were located in Las Vegas in 1953, which were being profitably mined prior to July 23, 1955, and were still being profitably mined at the time of the hearing.

The claimants held well over 4,000,000 cubic yards of marketable reserves on the four placer claims in question. The Bureau contested the validity of one claim based on the "Too Much Rule" laid down in Robert E. Anderson Jr. et al. (supra).

The Board dismissed the complaint stating "It has not been established by the appellant (the Bureau) that the market is so saturated with available supplies that material from this claim cannot be profitably utilized. The superabundant presence of sand and gravel does not establish the fact of a superabundant available supply. There has been no evidence presented to show that these claimants hold reserves in excess of their reasonable needs, despite the fact that others may hold reserves in excess of their needs."

United States v. Melton E. Baker. (23 IBLA 319, January 19, 1976).

The claimants had amortized their capital investment of a 10-year period, 1,000,000 cubic yards of cinders had been marketed from the claims from 1952 to 1965. The Board found the cinders a valuable deposit of common variety cinders and that they had valid discoveries as of July 23, 1955. The claimant's reserves on the four claims were estimated at 15,000,000 tons. This was 230 years of reserves at the claimants average yearly production rate.

> In summary, the Board found that: "... Although Baker was justified in the reasonable and prudent anticipation that a valuable mine could be developed on this deposit, and in proceeding with the expenditure of his labor and means to that end, he located claims for far more land and mineral than reason and prudence would allow."
>
> In consequence the Board ruled, based on Anderson and Bunkowski (supra), that two of the four claims were valid, based on the location of Baker's physical improvements, and the other two were ruled null and void, due to their containing excess reserves and fewer physical improvements. Baker then filed an action in the Federal courts which is described below.

Melton E. Baker v. United States of America (613 F. 2d 224, 230), Cert. denied 449 US 932, October 21, 1980).

Upon receipt of the Board's adverse decision on his two placer claims, Baker filed an action in the District Court of Arizona requesting a review of the Board's decision. The District Court dismissed the suit and Baker appealed to the 9th Circuit Court of Appeals.

The 9th Circuit Court held that the IBLA "Too Much Rule," prohibiting a claimant from locating claims in excess of the reasonably anticipated market need, was an abuse of discretion contrary to existing mining laws. The Board decision was vacated and remanded to the District Court to issue an order to the IBLA, directing the IBLA to validate Baker's claims. The 9th Circuit found that:

> "Neither Bunkowski nor Anderson relies on any statutory authority in support of the "Too Much Test."
>
> "Although Interior claims statutory support for the "Too Much Rule" our examination of the statutes and their legislative history revealed nothing which even inferentially supports such a departure from previous mining practice. The "Too Much Test" limits the overall amount of mineral and land an individual can claim under the mining laws.

Although the mining laws limit the size of claims, they have never set a limit on the number of claims an individual may locate and work. The validity of a claim has always been determined by an inquiry into that particular claim, not by an examination of the individual's other claims. The "Too Much Test" changes the focus of the relevant inquiry."

". . . the "Too Much Rule" is not workable and is not susceptible of practical application."

"The IBLA exceeded its discretionary and statutory powers when it adopted its "Too Much or Excess Reserves Rule." "The IBLA decision amounts to a legislative enactment by an executive tribunal. The IBLA possesses no such authority under our system of separation of powers."

"In sum we hold that the IBLA's adoption of the "Too Much Rule" was an abuse of discretion which was contrary to existing mining law. The result reached was arbitrary and capricious ."

The Bureau, as a test of marketability, can no longer raise the question of excess reserves in the validation of mining claims. Procedures will be modified accordingly in the near future via regulation changes at 43 CFR 3800.

The Department appealed the ruling of the 9th Circuit's decision, but the U.S. Supreme Court refused to hear the case (certiori denied 499 US 932 October 21, 1980) and let the 9th Circuit's decision stand.

Under the 9th Circuit Court's ruling the mining law makes no provision for excess reserves. Further, the court inferred that only legislation could limit holdings under the mining law. It will, therefore, no longer be necessary to determine if a claimant controls "excess reserves."

Robert H. Lawton

Deputy Director, Energy and Mineral
Resources (Acting)

EXCESS RESERVE RULE

PERLITE

IN REPLY REFER TO:
3860(570)

March 3, 1849

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
WASHINGTON, D.C. 20240

Ret

In		Initial
2	SD	
1	ASD	
	ADM	
3	RES	
4	OPER	
	PA	
	EEO	

Action by
Surname by
Return to

Affects
Info. Memo
82-247

November 24, 1982

Instruction Memorandum No. 83- 124
Expires 9/30/83

To: All State Directors

From: Director

EVANS

Subject: Administration of Marketability Test and the Applications of the "Excess Reserve Rule"

IBLA 79-265

On July 22, 1982, Information Memorandum 82-247 was issued on the subject of "Excess Reserves." It has come to our attention that there is a case pending in the Department captioned United States v. Oneida Perlite Corporation (57 IBLA 167, August 27, 1981) which is in the 9th Circuit jurisdiction. This case has been remanded for further hearings. Its eventual outcome may change the legal status of the applicability of the "Excess Reserve Rule." Therefore, to be consistant with the Department's position in Oneida Perlite, Information Memorandum 82-247 is hereby rescinded.

The Interior Board of Land Appeals (IBLA), in its discussion of Oneida Perlite (copy enclosed), has addressed the various positions held by the 9th Circuit Court on several cases dealing with this subject. As to the term "excess reserves," the IBLA points out that it is merely a descriptive term indicating that deposits are not "valuable" and hence the claims involved are not supported by a discovery of a valuable mineral deposit. (see 57 IBLA 210).

Because the 9th Circuit Court in Baker vs. United States, 613 F. 2nd 224 (9th Circuit 1980) struck down the use of "excess reserves," which it characterized as the "too much rule," the term "excess reserves" should no longer be used.

For minerals for which there is virtually an unlimited demand, such as precious metals and other metallic commodities, the size of the deposit deposit has never been of concern. For minerals in superabundance with a limited geographic market, consideration is still required as to whether each claim is valuable in an economic sense to ascertain whether a "valuable mineral deposit" has been discovered. This would include consideration of the quantity of the claimant's other holdings of the same mineral, the limitations of the market, the claimants share of that market, and other sources of supplies of that mineral to that same market (see 57 IBLA 193-195).

All of these considerations, together with many other factors, serve to determine whether a valuable deposit has been discovered on each claim and whether the land involved is mineral in character.

Appendix 9

In addition to the cases cited on Information Memorandum 82-247, other recent cases decided by the 9th Circuit Court have addressed the question of "excess reserves" and should be read in conjunction with Oneida Perlite, before formulating your approach to a particular examination where the question of excess reserves arises. These two cases are: Melluzzo v. Morton, 534 F. 2d 860, (9th Circuit 1976); and McCall v. Andrus 628 F. 2d 1185; cert denied, 49 USLW 3710, (March 23, 1981).

In future actions, pending the outcome of this Oneida Perlite case, please do not use the term "excess reserves" either in mineral reports or as contest charges.

If you have any questions, contact Roger Haskins, (WO 570) FTS 343-8537.

Sandra L. Blackstone
Deputy Director, Energy and Mineral Resource

1 Enclosure:
Encl. 1 - United States v. Oneida Perlite Corporation (57 IBLA 167-214) August 27, 1981) (48 pp)

MINERAL REPORTS

VALIDITY AND PATENT EXAMINATIONS FOR MINING CLAIMS IN CALIFORNIA

I. Cover Page

II. Title Page (BLM Form 3980-1)

III. Table of Contents

IV. List of Attachments

  A. All Attachments at End of Report

V. Summary, and Conclusions and Recommendations

  A. All on one page

VI. Indroduction

  A. Purpose of Report
  B. Dates of Field Examination
  C. Description of Field and Laboratory Work

VII. Land Status and Record Data

  A. Appropriate documents for action such as location notices, proofs of labor, Notice of Intent to Patent, and so forth.
  B. Make table showing document listing and date.

VIII. Location and Accessibility

  A. Where is deposit and how to you get there.

IX. Physical Features

  A. Topography
  B. Climate
  C. Vegetation
  D. Water and Power Facilities
  E. Surface Improvements

X. General Geology and Mining History

  A. Appropriate maps and records.

XI. Geology, Mineralization, and Workings at Site

  A. Appropriate topographic, mine works, geologic maps, sketches, cross sections (surface and underground); other items such as mineralogic data, lab results, drill hole data, description of sampling, and so forth.

XII. Mining, Milling, Processing, and Production

  A. Appropriate flow sheets, sketches, and tables.

Appendix 10

XIII. Economic Evaluation and Marketing

- A. General items and principles
- B. Procedures and results
- C. Marketing and utilization
- D. Economic Evaluation
  - 1. Determination of tonnage factors*
  - 2. Determination of tons*
  - 3. Determination of grade*
  - 4. Determination of costs*
  - 5. Ten-Acre Rule Determination for Placers

XIV. References Cited

- A. Use USGS citation method.

*Appropriate tables, sketches, and calculations.

PLACER GOLD SAMPLING, SAMPLE PROCESSING, AND EVALUATION OF RESULTS

By
J.R. Evans, Zone Minerals Leader
BLM, Folsom Resource Area Office
63 Natoma Street, Folsom, CA 95630

Prepared for the Dredging and Placer Mining Conference, MGM Grand Hotel, Reno, Nevada 89595, January 13-15, 1983.

Sponsored by the Nevada Institute of Technology, Reno, Nevada 89507.

INTRODUCTION

DEFINITIONS

A. Placer (Gold) Deposit - a deposit of clastic or residual sedimentary material containing valuable or potentially valuable amounts of material (gold) that has accumulated during weathering, and/or erosion.

  1. Weathering - mechanical or chemical.

  2. Erosion - gravity, surface and subsurface water, wind, ice, and ocean waves and currents.

TYPICAL PLACER INVESTIGATION

A. Geological examination.

  1. Look deposit over.

  2. Check maps, air photos, legal documents, technical literature.

  3. Study previous mining data, and data on adjacent mines.

B. Sampling.

  1. Choose method after local panning as guide.

  2. Possibilities.

    a. Existing exposure; channel.

    b. Hand dug pits.

    c. Bulldozer cuts.

    d. Bulk.

    e. Suction dredge.

C. Sample processing.

D. Evaluation of sample results.

E. Economic and technical feasibility studies.

F. Preparation of report containing summary and conclusions.

At this point show JOHN WELL'S book on PLACERS - for sale by Alaskan Prospectors Pubs, 504 College Rd., Fairbanks, Alaska 99701, $7.95.

G. Our investigations are to see if the placer deposit contains valuable minerals (gold) and to see if a DISCOVERY has been made on a valid claim.

DISCOVERY

A. Valid claim - legally proper, filed in good faith.

B. "Prudent Man" test.

C. "Mineability" test.

D. "Marketability" test.

E. "Profitability" test.

F. "Mineral In Character" test for each 10-acre tract.

G. All these items (A-F) determined in field, office, and lab - see TYPICAL PLACER INVESTIGATION (A-F).

BLM MINERAL LABRATORY AT FOLSOM

A. Show map on OPAQUE VIEW 1 (Calif. Geol., v. 35, No. 6, June, 1982), and discuss.

B. Show COLORED SLIDES 1, and 2, and discuss.

SAMPLING

A. Sampling and samples must be of adequate size, properly located and in sufficient number to help determine the geologic nature, mineral properties (gold content), and economic value of the deposit (DISCOVERY). The results of a sampling and sample processing program should reflect the best effort possible using proper equipment and techniques. Samples should be as representative as possible, so as to reflect the mining method to be used.

B. For interpretive purposes to supplement sample results, record in the field:

1. Date of examination.
2. Mineral examiner's name(s).
3. Purpose of examination (Serial No.).
4. Claim(s), and deposit names.
5. Acres involved.
6. Location.

7. Access.

8. Owners name and address.

9. Physiography and climate - working season.

10. Type of deposit (total yards, yards recovered).

11. Gradient of deposit (%) (ft./100 ft.).

12. Area been worked before? - describe, sample sites, sample results, production, history.

13. Overburden, type, extent compaction depth and nature of ground water surface.

14. Bedrock - type, relief on, depth to, smooth, jagged, jointed, slatey, pot-holed, solution cavities.

15. Nature of deposit - massive, stratified, channeled, thickness (average, range), induration, cementing agents, caliche layers.

16. Composition and texture - composition of clasts, roundness and sphericity of clasts, sorting (grading), ratio of -¼"/+¼" to 10" sized clasts, amount and distribution of boulders (10"+), clay (amount and type) - show (OPAQUE VIEW 2), and discuss.

17. Mining equipment and methods.

18. Water supply.

19. Power supply.

20. Federal, State and county regulations that could affect mining and reclamation and their possible effects.

21. How does miner describe gold distribution? Does he claim "locked" gold in black sands? What does he say about size, shape and surface appearance of gold?

22. Remarks.

23. Maps and sketches.

SAMPLE

A. We do not drill, but may use bulldozer or suction dredge.

B. Have owner present during sample taking (during entire examination if possible).

C. Record:

1. Date of sampling.
2. Mineral examiner's name(s).
3. Sample No.
4. Location
5. Serial No.
6. Type of sample.
7. Dimensions of sample site. Was sample into bedrock(?), if so, how far. Describe nature of bedrock.
8. Weight of material (lbs./yd.^{3} - usually 3000).
9. Weight of sample.
10. Weight of any concentrate.
11. Make allowance for moisture in weight determination.
12. Describe items under nature of deposit (15) and composition and texture (16) - see SAMPLING section.
13. Photograph sample, and sample site before and after sampling; use paint to mark sample site and number.

REPRESENTATIVE SAMPLES

A. Representative samples are hard to obtain and therefore the results of sample analyses must be carefully considered. Three major problem areas exist, they are:

1. Boulders may have to be considered; certainly if they are to be mined. Boulders may be mined around, moved by derrick, or blasted.
    a. If boulders are smaller than sample cut, weigh with sample.
    b. If boulders are larger than sample cut, make visual estimate for weight and add to sample weight. It is extremely important in this case to have photographs before and after sampling.
    c. If the sample is a bulk type then boulders are weighed with the sample.
    d. If a suction dredge is to be ued then boulders may not have to be considered, as the nature of the "sample" is different. More later.

2. The amount of gold in a placer deposit is very small in comparison to enclosing material. Any error in sampling or processing will be compounded when evaluating deposit. Errors can occur because gold has a high unit value and profoundly affects the calculated values. A deposit having a gold/material ratio of 1/billion by volume is worth about \$1.80/yd.^{3} (gold at \$420/oz.).

3. Gold seldom, if ever, occurs evenly distributed in a placer deposit. Typically it is erratic in distribution, particularly coarse gold.

    a. May be in thin flat horizons.

    b. May be in channels.

    c. May be throughout deposit, but in local zones.

    d. May be on, in, and near bedrock surfaces.

4. The answer:

    a. Take huge samples?

    b. Take numerous samples?

    c. Maybe, but one must use experience and judgement in sampling, and be sure to check bedrock surfaces!

5. Other valuable or potentially valuable minerals generally do not present as much of a problem as does gold; rutile, monazite, cassiterite, ilmenite, cinnabar, and so forth.

    a. Low unit value, errors will not be as greatly compounded as for gold.

    b. These minerals occur in greater amounts than does gold. Samples may be split safely.

    c. Often occur in finer and more uniform sized grains than does gold. They are easier to sample.

6. Sometimes unusual materials occur in a deposit and must be identified and evaluated.

    a. Show OPAQUE VIEWS 3, and 4, and discuss.

7. Gold content of a sample is only one of many factors that have a bearing on a paying placer mine. Other factors are unfavorable bedrock conditions, sticky clay, boulders, lack of water, caliche, mining and reclamation legal restraints, and so forth. Profitability is the key.

SAMPLE RESULTS

A. May give misleading information.

1. If proper procedures in sampling are not followed.

2. If salting occurs, either accidently or on purpose.

   a. Examine all equipment used in sampling and sample processing; before, during, and after use.

   b. Guard samples.

   c. Clean off sample sites.

   d. Use binocular microscope to check for unusual features such as shavings of gold.

3. Total sample not processed - sample may have been split. See 2 and 3 under REPRESENTATIVE SAMPLES - small gold content, high unit value, uneven distribution. Do not split placer gold deposit samples.

4. Fire assay or atomic absorption methods may have been used.

   a. Gold may be in other minerals which will not be recovered by conventional placer mining methods.

   b. Rare if sample charge representative - 29.2 gm. for 1 assay ton, for fire assay, and 10 gm. for solution, for atomic absorption.

   c. Fineness of gold not accounted for.

   d. Results from factors in a, b, or c, or a combination of factors can result in erratic and generally to high values.

   e. If local erratic high values are obtained in properly sampled and processed material, resample as a check.

GRAVITY AND MICROSCOPIC PROCEDURES FOR DETERMINING RECOVERABLE GOLD IN SAMPLES

A. There is no known substitute for processing placer gold samples by proper gravity and amalgamation methods. These procedures account for recoverable gold not total gold in the sample, and are representative of recovery by standard mining and processing techniques.

B. There is nothing wrong with many gravity separation and recovery units, but we use a Denver Gold Saver.

   1. Show COLORED SLIDES 3, 4, and 5, and discuss.

      a. Positive factors.

         (1) Easy to feed; can take volume, rated at 2-3 yd.^{3}/hr.

         (2) Breaks up small clayey lumps, and scours coated gold.

         (3) Efficient; produces -¼" concentrate through rotating trommel , coarse gold trap, and vibrating moulded riffle plate.

         (4) Economic, driven by 1½ hp. gasoline engine.

        (5) Easy to use; has reserve water storage tank with centrifugal pump and spray units. We set at 27 RPM and adjust water by eye. We have a coarse-sized wooden sluice to check for coarse gold, and a fine-sized wooden sluice with a rubber riffle plate in bottom. Canvas under an expanded metal riffle is also good.

        (6) Quickly and easily cleaned up.

        (7) Relatively light; unit weighs about 750 lbs. - can be mounted on a trailer for travel.

        (8) Mention recovery test made by John Wells, 1-18-72, p. 8 .

    b. Negative factors.

        (1) Attendence required at all times.

        (2) Some maintenance required in field; parts, hoses, tires, tools. Need to keep ready supply of needs.

        (3) Easy to salt.

        (4) Hard to get into some geographic areas.

        (5) Large clays lumps must be broken up before feeding.

2. If the sample is small, it can be collected in properly labeled 5 gallon plastic buckets (with lid), weighed and then introduced into feed hopper. If sample is large it can be placed on a canvas, then collected in plastic buckets for feed. Unless there is a reason, we figure 1 yard of material weighs 3000 pounds. If necessary, we pack a 1 ft.^{3} box with material and weigh it to determine wt./ft.^{3} and wt./yd.^{3}. Any allowance for moisture must be made. Show COLORED SLIDES 6, 7, and 8, and discuss.

C. Suction dredge

1. Nothing wrong with a suction dredge if a miner is using one on the claim(s).

2. A dredge is easy to salt and difficult to estimate yards processed.

    a. The following data were obtained from the Mother Lode Equipment store in Sacramento:

        (1) A 3" dredge rated at 8 yds.^{3}/hr. achieves from 1½ to 3 yds.^{3}/hr.

        (2) A 5" dredge rated at 16 yds.^{3}/hr. achieves from 3 to 5 yds.^{3}/hr.

        (3) An 8" dredge rated at 30 yds.^{3}/hr. achieves from 7 to 9 yds.^{3}/hr.

1-18-72

Denver Gold Saver - Recovery Test

At Folsom District Office, 7 samples from Round Mountain (Nevada County, CA) were washed through BLM's Denver Gold Saver in a normal way. To check the effectiveness of this machine, small particles of silver (assayer's silver foil) were added to two of the samples before washing. After washing, black sand concentrate retained in the Gold Saver riffle was checked for silver particles.

Sample RM 2-1

10 pieces silver totaling 10.57 mg (aver. 1.06 mg ea.) added to sample. All ten pieces were found in riffle concentrate.

Sample RM 2-4

10 pieces silver totaling 8.50 mg (aver. 0.85 mg ea.) added to sample. All ten pieces were found in riffle concentrate.

Note: Sp. gr gold = 19.3
Sp. gr silver = 10.5

Weight ratio, gold to silver = 1.8 to 1, in air.

$$\frac{19.3-1}{10.5-1} = \frac{18.3}{9.5}$$

Weight ratio, gold to silver = 1.9 to 1, in water.

IMPORTANT POINTS

1. Silver was easy to see and identify.
2. As foil it had a tendancy to float.
3. SG is about ½ that of gold.
4. If the foil is saved then certainly gold will be saved.

3. Problems exist with throughput calculations because of abundant coarse size material, or abundant clay sized material, or sticky clays. Also operator may not be pumping material 100% of the time.

4. Suction dredge is most efficient when pumping sand only.

5. I like to sit on miners equipment in best locations for a specified time (at least 2 hours).

6. Gold mined, and $/hr. (or day) is the key, not exact yardage mined.

D. Dry washer (show OPAQUE VIEW 5, and discuss).

1. Separates gold from sand by pulsations of air through a screen - canvas covered. Riffle concentrate is then usually panned.

2. If a miner will, or is using a dry washer then we should test the deposit with a dry washer, preferrably his.

3. Problems.

a. Dry washers have low output, at most 1 yd.^{3}/hr., with steady use. After sizing, the riffle must be cleanned and panned which takes more time. Also, all +¼" sized material must be screened off, and checked carefully for nuggets, which takes even more time.

b. Poor recovery of fine and flakey gold.

c. If gold is not liberated from clay-bound chunks, and caliche-cemented pieces, it will pass over the grizzly screen and be lost. Material should be disintegrated.

d. Mined material must be dry.

E. Panning (as applied to Denver Gold Saver).

1. Material to be panned is collected from the moulded riffle plate and the fine-sized sluice by washing into a 5-gallon plastic bucket. Excess water is poured off and the bucket is carefully marked, a sample stick placed in it, and then weighed; with allowance for any contained water. A lid is then placed on the bucket, and it is brought to the BLM Mineral Lab.

(a) My experience with sand and gravel deposits indicates that - No. 4 mesh material is as much as 7½% (by weight) water and + No. 4 mesh is as much as 1½% (by weight) water - without significant time to drain. Therefore, if concentrate weighs 80 lbs. after pouring off excess water there may remain about 5% moisture; 0.5 x 80 lbs. = 4 lbs., and 80 lbs. - 4 lbs. = 76 lbs. dry weight.

2. Any coarse gold from the DGS trap or the coarse-sized sluice is placed in glass vials, or mason jars, marked as to sample number.

3. In the BLM Mineral Laboratory the sample buckets are washed into 12" diameter pans (7½" bottom dia., 2" deep) and panned over No. 3 wash tubs to remove light weight -¼" meterial and to recover black sand, and any obvious gold (with a medicine dropper if necessary). Any gold is added to the marked vials as appropriate, and the black sand concentrate weighed (with allowance for water) to determine the lbs. of black sand per yard^3 of material. Show COLORED SLIDES 9, and 10, and discuss.

4. Black sand concentrates are then washed into a gallon, or half-gallon jug via a funnel, except for several separates which are dried. Show COLORED SLIDE 11 and discuss.

5. Gold from the vials and the black sand separates is then examined with the binocular scope. Show COLORED SLIDE 12 and discuss.

    a. Gold.

        (1) Check for shavings (indicates salting).

        (2) Record color; bright, yellow, silverish, coated with Fe or Mn, stained.

        (3) Surface texture; rough, smooth, pitted.

        (4) Any rock particles adhered to gold.

        (5) Shape; round, angular, flakey.

        (6) Size.

            i. Coarse; +No. 10 mesh, large sizes called nuggets.

            ii. Medium; -No. 10 mesh to +No. 20 mesh, about 2,200 per oz.

            iii. Fine; -No. 20 mesh to +No. 40 mesh, about 40,000 per oz.

            iv. Very fine; -No. 40 mesh, about 40,000 per oz.

    b. Black sand separates.

        (1) Any gold stuck to grains? Is abrasion required?

        (2) Any gold coated with Fe or Mn? Is scouring required?

        (3) Any gold "locked" in black sand grains? Does miner claim such?

(i) If so, grind sand to -No. 200 mesh in steel mortar.

(4) Any unusual minerals in black sand? If so, identify.

AMALGAMATION OF BLACK SAND CONCENTRATES

A. In 12" plastic pan over safety pan to recover any remaining gold.

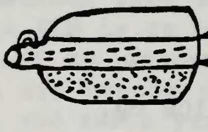
1. I do not do even though a good panner can.

2. Mercury beads, even though a few drops of H_2SO_4 will reunite it.

3. Sand tends to pack and mercury rides over it.

B. In gallon or half-gallon jugs placed on slow speed motor-driven rollers. Speed of the rollers is adjusted so that the black sand -water-mercury charge rolls around the side of the jugs and does not cascade. Show COLORED SLIDE 13 and discuss.

C. Receipe.

1. 
water level
maximum black sand level - 3 to 4 lbs. in gallon jug and 1-2 lbs. in half-gallon jug.

a. Add black sand separates.

b. Add water.

c. Add ¼ teaspoon of NaOH for oil and grease.

d. Add about 2 milliliters of Hg (1 milliliter for half-gallon jug). WEIGH Hg BEFORE ADDED

e. Mix carefully and place on rollers for at least one hour.

AMALGAM PROCESSING (Show COLORED SLIDE 14, and discuss)

A. Contents of jugs are washed into a plastic pan, and the mercury removed. WEIGH Hg WHEN REMOVED.

B. The mercury is placed into a 150 ml. pyrex beaker, and 40 to 50 ml. of commercial nitric acid (diluted 50%) added. This strength of acid should disolve the mercury without violent action.

C. The mercury is reduced to about the size of a match head and transferred to a No. 0 glazed porcelain parting cup.

D. Fresh (1:1) acid is added and digestion completed with low heat on a hot plate. Show COLORED SLIDE 15, and discuss. The residue will be sponge gold. Avoid rapid digestion or boiling of mercury.

E. Decant off spent acid, and wash gold sponge 3 times with warm water from squeeze bottle. Then add several drops of alcohol to remove water and dry the gold. Next dry the sponge gold in the parting cup at low heat on a hot plate.

F. Anneal the gold by bringing the bottom of the parting cup to a red heat over a bunson burner. This heating will remove all the mercury. Show COLORED SLIDE 16, and discuss.

G. Weigh the gold to the nearest 0.1 of a milligram. Show COLORED SLIDE 17, and discuss.

H. At this point make sure all information about each sample is recorded carefully, clearly, and completely.

REPORTING AND CALCULATION PROCEDURES

A. I report data in milligrams/yd.^{3} and dollars/yd.^{3}.

1. Accounts for fineness and material being mined by yard.^{3}

   a. Exception - gold dredge; milligrams/unit time, and dollars/unit time.

B. Calculations.

1. Value of gold in ¢/mg. where 1 troy ounce = 31,104 mg.

$$\frac{\text{\$/oz. Au x fineness x 0.1}}{\text{31,104 mg.}} = \underline{\text{¢/mg.}}$$

If gold is $\underline{\text{\$420/oz.}}$ then:

$$\frac{\text{\$420 x 900* x 0.1}}{\text{31,104 mg.}} = \underline{\text{¢122/mg.}}$$

$$\frac{420 \times 900 \times 0.001}{31{,}104} = 0.01$$

or 1.

and,

$$\frac{\text{mg. Au x ¢/mg. x 3000 lbs. (1 yd.}^3\text{)}}{\text{Sample wt. in lbs.}} = \underline{\text{¢/yd.}^3}$$

If there are 10 mg. of gold in a sample that weighed 500 lbs. then ¢/yd.^{3} are:

$$\frac{\text{10 mg. Au x ¢122 x 3000 lbs. (1 yd.}^3\text{)}}{\text{500 lbs.}} = \underline{\text{¢73.2 /yd.}^3}$$

and 500 lbs./3000 lbs. compared to 10 mg./x mg.
500 x = 30,000 or 60 mg./yd.^{3}

(or 3000 lbs. / 500 lbs. x 10 mg. = 6 x 10 or 60 mg./yd.^{3})

*Fineness is based on 1000 for pure gold - 850 to 950 fine gold is not uncommon. The higher the fineness the stronger the gold color. Often fineness is reasonably consistent within an area, but placer gold may come from several different areas and fineness may vary. Mention St. Min. Rept., 4th, 1884, p. 219-224. After study and consideration I use 900 fine for all calculations.

Free Au	Amalg. Au
5	5
10	

C. Summary sheet.

1.

Sample No.	Sample Wt. (lbs.)	Black sand Wt. (lbs.)	Recoverable gold (mg.)	/mg Au	/yd.³ Au	mg./yd.³ Au
HD-1	500	30	10	122	732	60

Material weighs 3000 lbs./yd.³
Gold fineness 900
Gold price 420 $

Sampled by EVANS Date 1-10-83
Processed by EVANS Date 1-10-83
Calculation by EVANS Date 1-10-83

Remarks

$/mg
¢/mg

D. It is important to keep accurate, complete, systematic, and signed records in sampling and processing gold placer deposits. The adequacy of records will reflect on the quality and legality of the mineral examination, and the mineral examiner. Data will be no better than the methods used and the records kept. Our function in these matters in the BLM is to certify discovery. However, the above procedures can be used to determine reserves on a placer gold property, provided there are proper samples in sufficient number to block out ground by grade and cubic yards.

OPAQUE VIEW 1

ACKNOWLEDGMENTS

The assistance of the following persons in supplying information used in this article is gratefully acknowledged: Leona Franke, Planning Director, City of Folsom; Elaine Jerome, Manager of the Communications Department, Aerojet Liquid Rocket Company, Sacramento; Dante Lembi, Executive Vice President, Natomas Real Estate Company, a division of the Natomas Company, San Francisco; Ronald Maertz, Sacramento County Planning Department; Ralph Mitchell, representative of Lone Star Industries, San Mateo; Gene Robison, General Manager of McDonnel-Douglas Properties, Sacramento; Cyril Thomas, Natomas Company engineer since 1933 (now retired), Folsom; and Harry Wall, Manager of Aerojet Investments, Ltd., Sacramento.

MAP 2

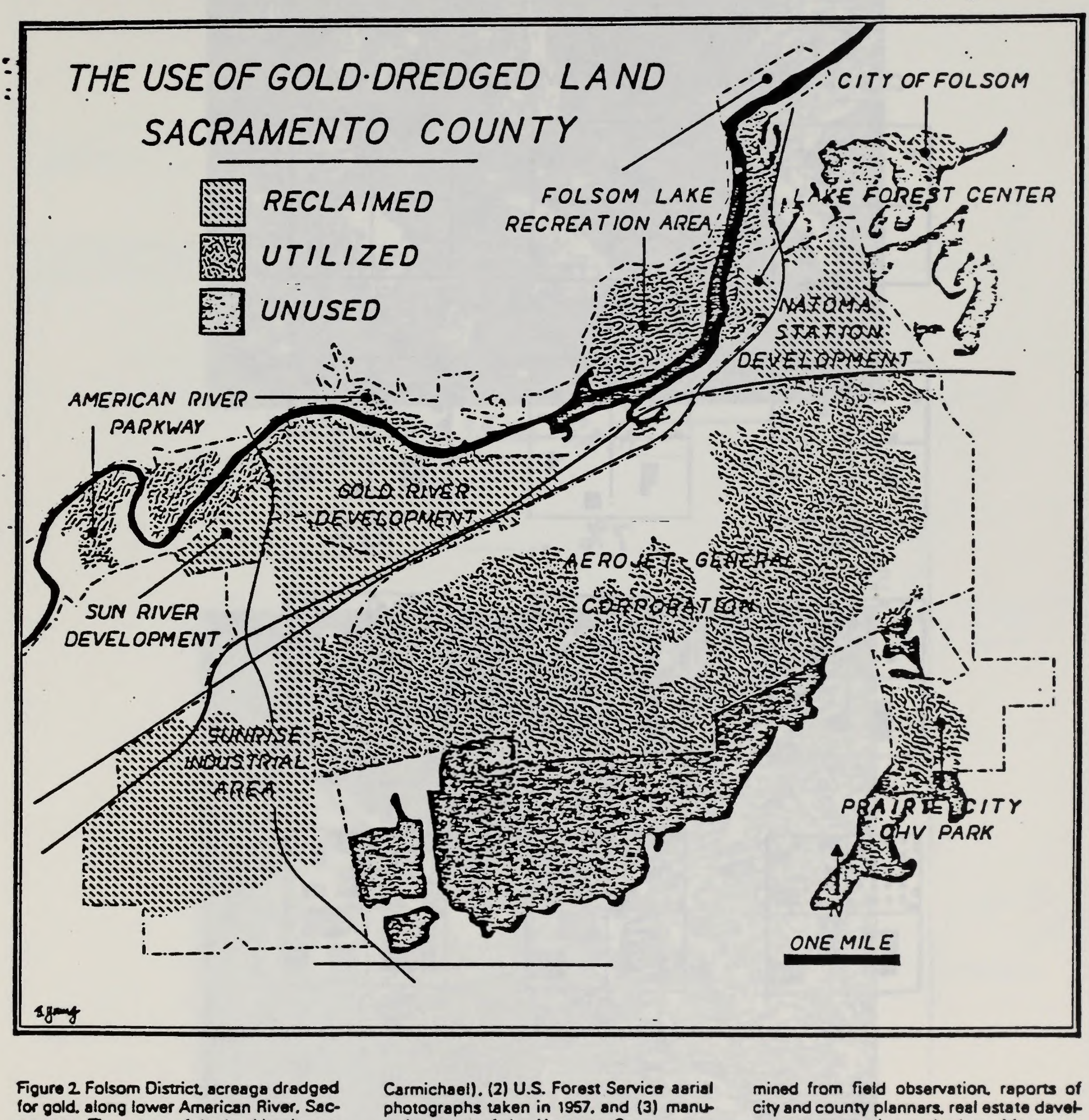
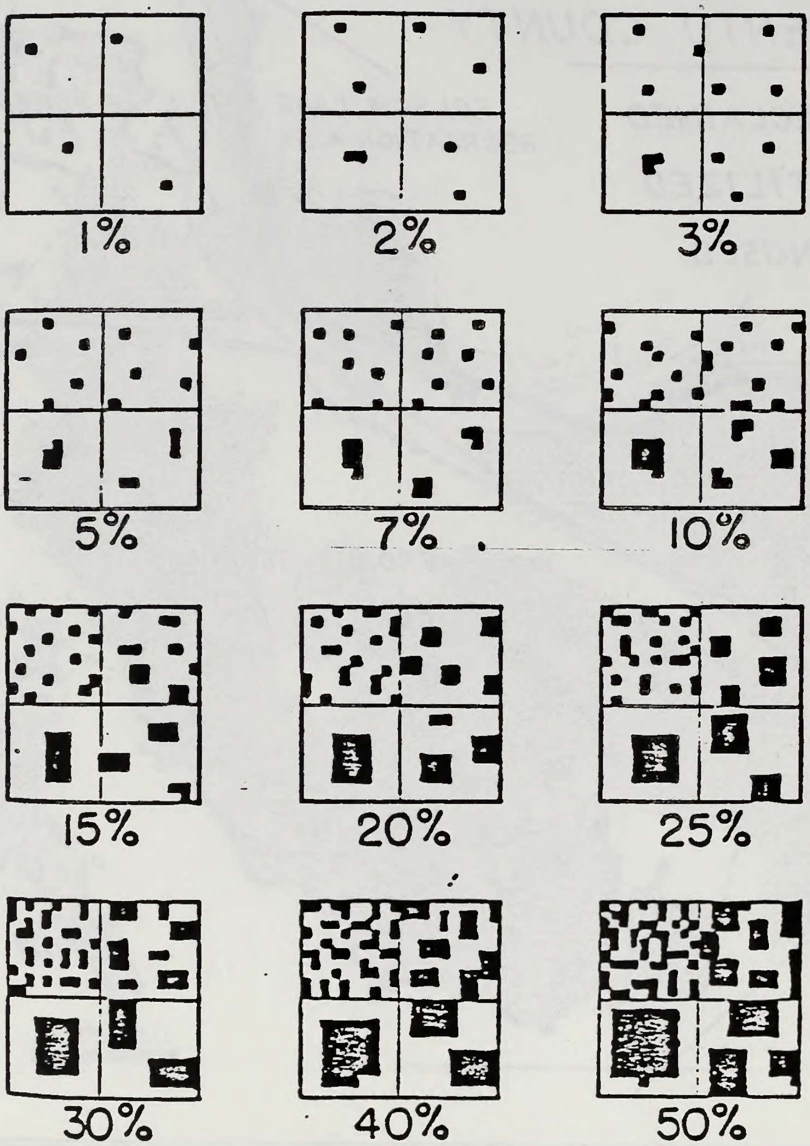


Figure 2. Folsom District, acreage dredged for gold, along lower American River, Sacramento. The extent of dredged lands was determined from (1) U.S. Geological Survey topographic quadrangles (Folsom, Citrus Heights, Buffalo Creek, and Carmichael), (2) U.S. Forest Service aerial photographs taken in 1957, and (3) manuscript maps of the Natomas Company on file in the State Library in Sacramento, California. The contemporary land use of these dredged lands (see table 1) was determined from field observation, reports of city and county planners, real estate development companies, and others. Most area measurements were calculated using a numonics digitizing planimeter.

...... OPAQUE VIEW. 2

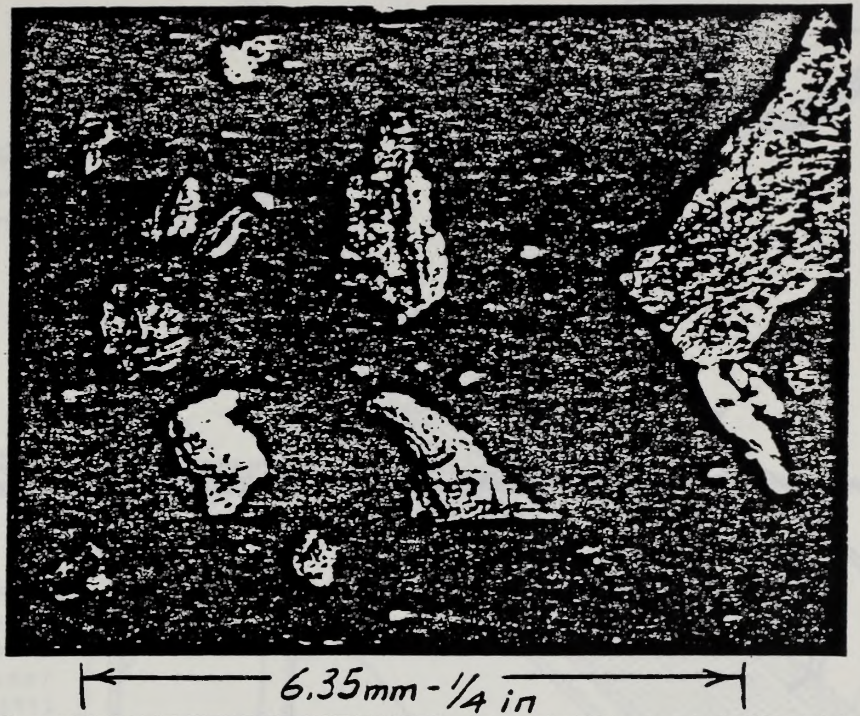
CHART FOR VISUAL PERCENTAGE ESTIMATION



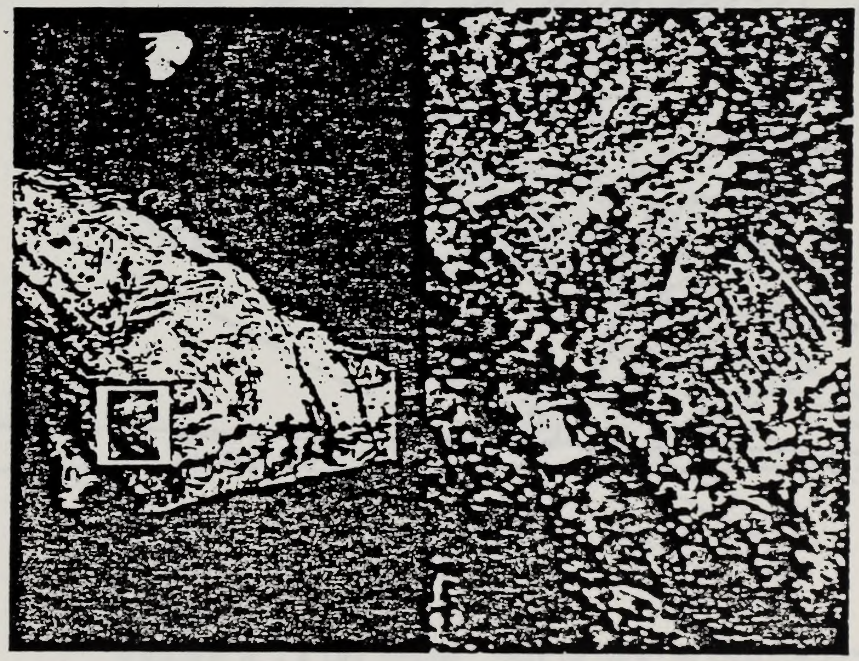
From R.L. Folk, Jour.
Sed. Pet., v. 21, No. 1,
p. 33, 1951

Data from USBM, Reno, Nev. OPAQUE VIEW 3

11-10-82



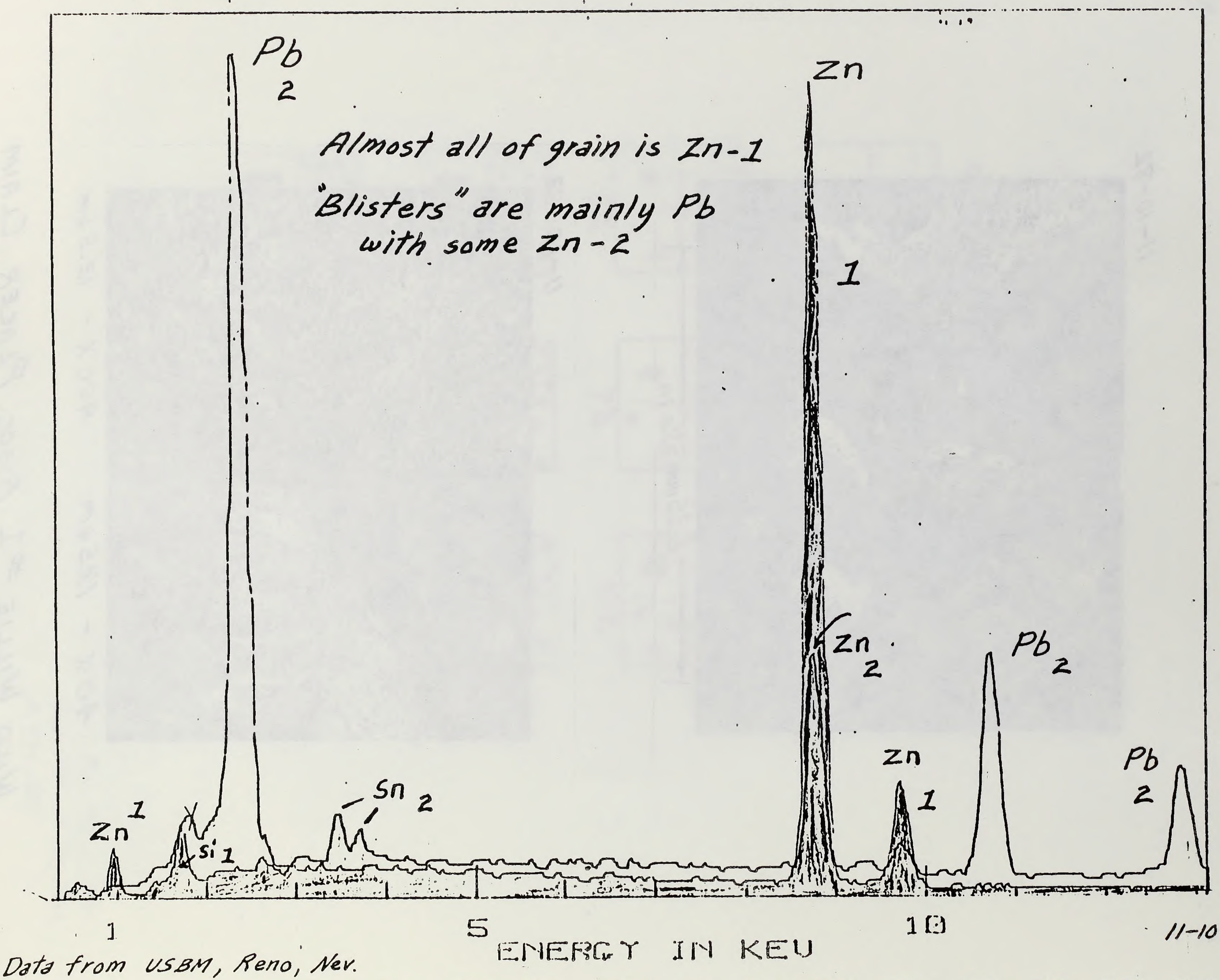
11-10-82



40X - 125µm 400X - 12.5µm

WILD WILLIE #1 ASSOC. PLACER CLAIM
8mi ± E. of Likely, Warner Mts., Modoc Co.

OPAQUE VIEW 4



Almost all of grain is Zn-1

"Blisters" are mainly Pb
with some Zn-2

11-10-82

Data from USBM, Reno, Nev.

OPAQUE VIEW 5

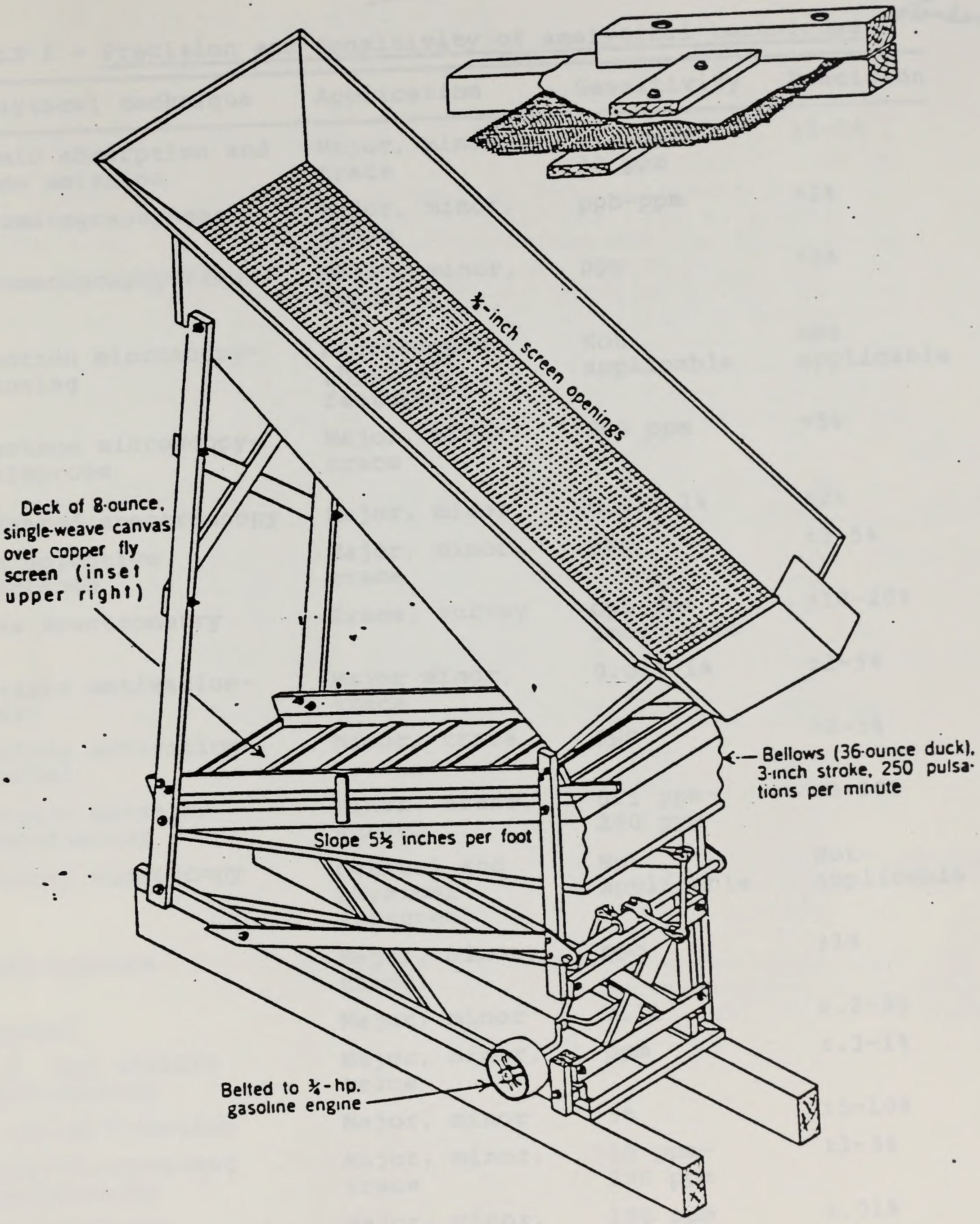

⅛-inch screen openings
Deck of 8-ounce, single-weave canvas over copper fly screen (inset upper right)
Bellows (36-ounce duck), 3-inch stroke, 250 pulsations per minute
Slope 5½ inches per foot
Belted to ¾-hp. gasoline engine

FIGURE 6. - A Dry Washer. (May be hand- or machine-powered.)

FROM BM IC 8517, 1971

EVANS

Careful when did you last check it

are key not necessarily standard

TABLE 1 - Precision and sensitivity of analytical techniques

Analytical technique	Application	Sensitivity	Precision
Atomic absorption and flame emission	Major, minor, trace	0.1 ppm-30 ppm	±2-5%
Chromatography-gas	Major, minor, trace	ppb-ppm	±2%
Chromatography-liquid	Major, minor, trace	ppm	±2%
Electron microscopy-scanning	Microscopic physical features	Not applicable	Not applicable
Electron microscopy-microprobe	Major, minor, trace	500 ppm	±5%
Infrared spectroscopy	Major, minor	0.01%-1%	±2%
Ion selective electrode	Major, minor, trace	ppm	±3-5%
Mass spectrometry	Trace, survey	ppb for inorganics	±10-20%
Neutron activation-fast	Major minor, trace	0.01%-1%	±2-5%
Neutron activation-thermal	Minor, trace	ppb	±2-5%
Optical emission spectroscopy	Minor, trace, survey	0.1 ppm-200 ppm	±5-10%
Optical microscopy	Optical and physical features	Not applicable	Not applicable
Radiotracers	Major, minor, trace	ppb	±1%
Thermal	Major, minor	0.1%	±.2-3%
U.V. and visible spectroscopy	Major, minor, trace	ppm	±.3-1%
X-ray-diffraction	Major, minor	5%	±5-10%
X-ray-fluorescent spectroscopy	Major, minor, trace	10 ppm-200 ppm	±1-3%
Wet chemistry	Major, minor, trace	100 ppm	±.01%

Appendix 12

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Gold analysis and sampling size

The following table shows the relationship between ore grade, sample size required and screen mesh of the sample to achieve a predetermined accuracy of sampling. This inherent sampling error is in addition to the errors of the fire assay or fire assay-ICP procedures. Since in a proper fire assay these are usually small in comparison to the intrinsic sampling error, they can be ignored in ore grade material. For very small samples or for very low grades of ore, the various analytical errors predominate and the tables are only approximate. This table was calculated from P. M. Gy's work on ore sampling and assumed a gold particle size up to the mesh size. Consequently, for a "Carlin" type ultra fine gold ore these values overestimate the sample size required. Gy, in his work, also had to make many other simplifying assumptions which don't occur in the real world, so the values should be considered only as intelligent estimates.

.5 oz/t 36.5 13.2 4.8 1.6

Grade	Accuracy required	Sample size, in grams, required for: -70 mesh	-100 mesh	-140 mesh	-200 mesh
.1 oz/T	67%	18.5	6.6	2.4	.8
	90%	207.0	74.0	26.0	9.3
	95%	820.0	293.0	107.0	37.0
.05 oz/T	67%	37.0	13.2	4.8	1.7
	90%	409.0	146.0	53.0	18.0
	95%	1638.0	585.0	213.0	73.0
.01 oz/T	67%	185.0	66.0	24.0	8.3
	90%	2047.0	731.0	267.0	91.0
	95%	8193.0	2926.0	1067.0	366.0
.005 oz/T	67%	370.0	132.0	48.0	17.0
	90%	4096.0	1463.0	533.0	183.0
	95%	16383.0	5851.0	2134.0	731.0

P.S. This table was constructed to remind you of the errors one can expect in a randomly mixed ore. The sample size we can handle is normally fixed at 1 A.T. (29.167 g)

1 pt. per 1/4 million = 1 assay ton

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ICP - OES
Detection Limits

ppm in sample	ug/ml	Elements
.01-0.1	.0001-.001	Be, Mn, Sr
0.1-1.0	.001-.01	Ba, Cd, Co, Fe, Li, Ti, Y
1-10	.01-.1	Ag, Au, B, Cr, Cu, Hg, La, Mg, No, Nb, Ni, Pb, Pd, Pt, Sn, Th, V, Zn, Zr
10-50	0.1-0.5	Al, As, Bi, Ca, Ga, K, Na, P, Sb, Te, U, W
100-1000	1-10	Se, Si

1 assay ton

Detection limits, oz/ton

Element	FA	FA/ICP	FA/AA	FA/Spec.
Au	0.005	0.0002	0.0009	0.002
Ag	.05	0.002	0.0009	—
Pt	--	0.001	0.005	.001
Pd	--	0.001	0.001	.001

EVANS

ATOMIC ABORPTION ANALYSIS DETECTION LIMIT

ELEMENTS	DETECTION LIMIT µg/ml	SOLID 1g/100 ml ppm	SANDBERG 25:1	$PbCl_2$ 200:1
Ag	0.05	5 7 FLAME	<1	<10
Al	1	1,250*	<25	
As	1	300 100	25	
Au	0.1		2	
Ba	2	200		
Be	.03 0.05	5 15	<1	
Bi	.6	100	<15	
Ca	1.0#	100#	<8#(25)	<60
Cd	0.03	3	<.7	<6
Co	0.1	10	<2	<20
Cr	0.1	50✓ .25g/100 50	< 3	
Cs Cu	0.1 .05	5	<1	<10
Eu	3	300		
Fe	0.1	10	<4	<20
Ga	1	100		
Hf	20	2,000		
Hg	10			
In	0.2	1@		
K	0.1	10	<2	<20
Li	0.1	10	<2	<20
Mg	0.03	3	<.7	<6
Mn	0.05	5	<1	<10
Mo	3	30	< 8	<200
Na	0.1	10	<2	<20
Nb	50	5,000		

✓ = Fusion
@ = Extraction
* = $LiBo_2$
# = Easily contaminated
^ = 2X dilution in Lanthenum

ELEMENTS	DETECTION LIMIT µg/ml	SOLID 1g/100 ml ppm	Standard 25:1	$PbCl_2$ 200:1
Nd	30	3,000 Standard		
Ni	0.1	10	2	20
Pb	0.3	30	8	
Pd	0.2^			
Pr	10	1,000		
Pt	2^			
Rb	.1			
Re	0.05	5		
Rh	0. .1			
Sb	1	300 100	25	600
Se	1	100		
Si	10	12,500*		
Sm	1	100		
Sn	2	300	50	600
Sr	0.1	10		
Ta	50	5,000		
Te	1	100		
Ti	2	625*		
Tl	0.2	1@		
V	2	200	<50	
W	25	2,500		
Zn	0.05	5	1	10

✓ = Fusion
@ = Extraction
* = $LiBo_2$
# = Easily contaminated
^ = 2X dilution in Lanthenum

Table 1. Semiquatitative Optical Emission Spectrographic Analysis

Element	Detection Limit (percent)	Element	Detection Limit (percent)
Al	.001	Mo	.001
Ag	.001	Na	.4
As	.1	Nb	.007
Au	.002	Ni	.002
B	.002	P	.2
Ba	.07	Pb	.01
Be	.001	Pt	.005
Bi	.004	Re	.005
Ca	.02	Sb	.04
Cd	.04	Sc	.005
Co	.002	Si	.0003
Cr	.001	Sn	.002
Cu	.001	Sr	.06
Fe	.002	Ta	.008
Ga	.002	Te	.8
Hf	.008	Ti	.001
In	.01	Tl	.2
La	.01	V	.003
Li	.1	Zn	.1
Mg	.0004	Zr	.004
Mn	.001	Y	.001

Form 1279—3
(June 1984)

BORROWE

TN 223 .097 1984

Outline of the w
guidelines for

DATE LOANED	BORROWER

USDI — BLM